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Emergence of *Cryptococcus gattii* — Pacific Northwest, 2004–2010

Cryptococcus is a genus of fungi, of which two species, *Cryptococcus neoformans* and *Cryptococcus gattii*, cause nearly all human and animal cryptococcal infections. Whereas *C. neoformans* primarily affects persons infected with human immunodeficiency virus (HIV) worldwide, *C. gattii* primarily affects HIV-uninfected persons in tropical and subtropical regions (*1*). In December 2004, a case of human *C. gattii* infection was reported in Oregon, associated with an outbreak on Vancouver Island and in mainland British Columbia, Canada (*2*). A second *C. gattii* case was reported in Oregon in 2005, and 12 more cases were reported in 2006 and 2007. In 2008, in response to the emergence of *C. gattii* in the United States, CDC, state and local public health authorities, and the British Columbia Centre for Disease Control (BCCDC) formed the *Cryptococcus gattii* Public Health Working Group (*1*). States began collecting epidemiologic information on patients and sending isolates to CDC. By July 2010, a total of 60 human cases had been reported to CDC from four states (California, Idaho, Oregon, and Washington) in the Pacific Northwest. Among 52 patients for whom travel history was known, 46 (88%) said they had not traveled to British Columbia or any other *C. gattii*–endemic areas, suggesting they acquired the infection locally. Among 45 patients with known outcomes, nine (20%) died because of *C. gattii* infection, and six (13%) died with *C. gattii* infection. Physicians should consider *C. gattii* as a possible etiology of a cryptococcal infection among persons living in or traveling to the Pacific Northwest or traveling to other *C. gattii*–endemic areas.

Multilocus sequence typing subcategorizes *C. gattii* into four genotypes: VGI, VGII, VGIII, and VGIV. Further genetic analysis divides the VGII genotype into three subtypes: VGIIa, VGIIb, and VGIIc (*3*). Although VGII is the genotype most commonly associated with the outbreak in the United States and British Columbia, it is uncommon in other *C. gattii*–endemic parts of the world, where VGI is isolated most frequently (*3*).

During 1999, *C. gattii* began appearing in animals and humans on Vancouver Island and, beginning in 2004, among mainland British Columbia residents who had no exposure to Vancouver Island (*2,4*). By the end of 2007, a total of 218 human cases had been reported to BCCDC (*5*). Studies from British Columbia and elsewhere showed a median incubation period of 6–7 months, with a range of 2–13 months (*1*). The median age of patients in British Columbia was 59 years, with age-specific incidence highest among persons aged 70–79 years (*5*). Only 38% of patients had an identifiable immunosuppressive condition (*5*). Reported case-fatality rates either from or with *C. gattii* infection was 9% (*5*). Studies on Vancouver Island found *C. gattii* spores in the environment, often in association with trees and soil (*6*).

The two human infections reported from Oregon in 2004 and 2005 were from *C. gattii* subtypes VGIIa and VGIIc (*3*). The VGIIc subtype had not been found previously anywhere in the world; the VGIIa isolate was genetically distinct from the British Columbia VGIIa isolates (*4*). Neither patient had traveled to Vancouver Island or any other known *C. gattii*–endemic area. In early 2006, a resident of Orcas Island, Washington, developed *C. gattii* VGIIa infection with a strain indistinguishable from the British Columbia VGIIa strain (*7*).

In October 2009, the *C. gattii* Public Health Working Group formalized a surveillance system for *C. gattii* and housed it at CDC. The system includes standardized human and veterinary case report forms and isolate submission protocols. Standardized case report forms include questions about patient demographics, health history, and illness onset and course, and are completed

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by state or local health departments through interviews with patients or their family members. For the surveillance system, a case is defined as an illness occurring on or after January 1, 2004, in a U.S. resident or animal with a culture-confirmed isolate of *C. gattii*. Case report forms are completed after a patient isolate is confirmed as *C. gattii* at CDC. Chart reviews and patient or family member interviews for collection of patient information are carried out by state and local health departments to gather data on symptoms and illness course. For patients whose illness occurred before the surveillance system was initiated, isolates were sent to CDC or BCCDC at the time of illness; chart reviews and patient or family member interviews carried out at the time of illness were used to complete the case report forms.

During January 1, 2004–July 1, 2010, a total of 60 human cases of *C. gattii* infection were reported to CDC (Figure): 43 from Oregon, 15 from Washington, one from California, and one from Idaho. Approximately half (54%) of the patients were male (Table); patients ranged in age from 15 to 95 years, with the highest proportion of patients (45%) aged 50–69 years (Table). Among 47 patients for whom such information was known, 38 (81%) had an underlying condition that might have predisposed them to infection, including three patients with HIV infections. Of all patient isolates, 50% were subtype VGIIa, 32% were VGIIc, 10% were VGIIb, 5% were VGI, and 3% were VGIII. The most common clinical finding was pneumonia, occurring among 57% of patients.

Among the 45 patients for whom outcome was known, nine (20%) died because of *C. gattii* infection and six (13%) died with *C. gattii* infection; two of the nine who died from *C. gattii* infection had no predisposing condition. In addition to human cases, 52 veterinary cases (among cats, dogs, ferrets, sheep, camelids, elk, horses, goats, and porpoises) were reported to CDC from California, Hawaii, Oregon, and Washington.

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Editorial Note

C. gattii is an emerging infection in the United States. *C. gattii* appears to differ from its sibling

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What is already known on this topic?

Human *Cryptococcus gattii* infection, formerly limited to tropical and subtropical regions of the world, emerged in British Columbia in 1999, causing approximately 200 infections, with a reported case-fatality rate of 9%.

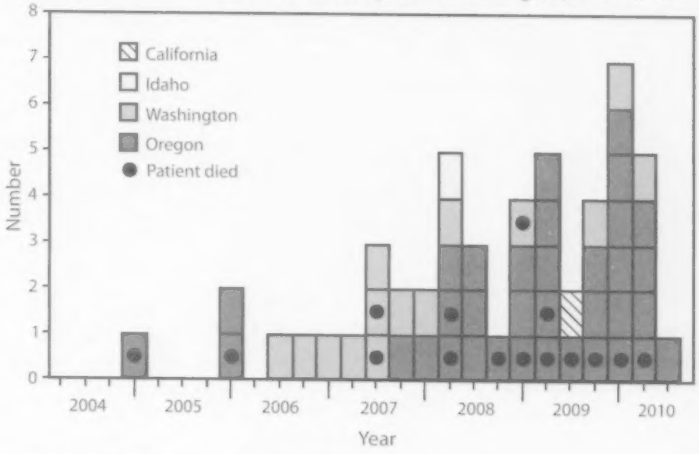
What is added by this report?

Since 2004, *C. gattii* has emerged as a pathogen of humans and animals in the U.S. Pacific Northwest, resulting in 60 human infections and at least 15 deaths among persons infected.

What are the implications for public health practice?

Physicians should consider *C. gattii* as a possible etiology of infection when treating patients (particularly those who are HIV negative) who have signs and symptoms of cryptococcal infection, and should ask patients about recent travel to the Pacific Northwest, British Columbia, or other *C. gattii*–endemic areas. Physicians, particularly in the Pacific Northwest, should report suspected *C. gattii* infections and submit clinical isolates to their state health departments when requested.

FIGURE. Cases of *Cryptococcus gattii* infection* (n = 51) with known illness onset date,† by quarter — California, Idaho, Oregon, and Washington, 2004–2010



Source: *Cryptococcus gattii* Public Health Working Group.

* Defined as illness occurring on or after January 1, 2004, in a U.S. resident with a culture-confirmed isolate of *C. gattii*.

† Includes estimated date for one patient each in 2007, 2008, and 2010, and two patients in 2009.

species, *C. neoformans*, both in its clinical aspects (e.g., less responsive to antifungal drugs and more likely to cause tumor-like lesions called cryptococcomas) and its ecologic niche (*2,8*). In addition, whereas the primary risk factor for *C. neoformans* cryptococcosis is severe immunosuppression (e.g., from HIV infection), risk factors for *C. gattii* infection in the United States appear to include both immunocompromise and exposure to specific regions of environmental fungal colonization (*2,8*). Many cases of *C. gattii* infection are likely not recognized because distinguishing between *C. gattii* and *C. neoformans* requires plating on differential media not routinely available in clinical microbiology laboratories; therefore, many cryptococcal infections are never speciated. In addition, cryptococcal infections generally are not notifiable diseases in the United States, although *C. gattii* is now reportable in one state, Washington, as a rare disease of public health importance.

Until 1999, most human *C. gattii* infections were reported from Australia and other tropical and subtropical regions, including parts of Africa, Asia, the Mediterranean, South America, and southern California (*8*). Fungal spores are known to colonize the nasal cavity and spread to other body sites, causing meningitis, pneumonia, and the development of lung, brain, or muscle cryptococcomas (*8*). The infection is not known to be transmitted among or within animal species. Although *C. gattii* had been isolated rarely from environmental sources and patients in the United States before 2004 (*2*), U.S. outbreaks had not been reported.

Because *C. gattii* typically has been regarded as tropical or subtropical in geographic distribution, its emergence in a temperate climate suggests that the pathogen might have adapted to a new climatic niche, or that climatic warming might have created an environment in which minimum threshold conditions for *C. gattii* spore survival and propagation are attained consistently (*1,2*). Alternatively, the environmental conditions supportive of *C. gattii* might be broader than previously suspected, or earlier propagation might have been inhibited by low concentrations of pathogen in the environment. In addition, infections might have occurred in the Pacific Northwest before the recognized increase in human cases, but too rarely to attract attention. However, retrospective speciation of 49 cryptococcal isolates from the Pacific Northwest obtained from 1997 through 2003 (*7*) and 31 isolates from Vancouver Island obtained from 1987 through 1998 (*9*) revealed exclusively *C. neoformans*, suggesting that the recent increase in reports of *C. gattii* represent actual emergence of the species in the region and not just an increase in disease awareness and reporting.

Additional systematic surveillance is needed to track *C. gattii* infection, along with increased awareness of the infection among public health

TABLE. Microbiologic, demographic, and clinical characteristics of patients with *Cryptococcus gattii* infection* — California, Idaho, Oregon, and Washington, 2004–2010

Characteristic	No.	(%)†
Sex (n = 52)		
Male	28	(54)
Female	24	(46)
Age (yrs) (n = 51)		
<18	2	(4)
18–29	3	(6)
30–49	17	(33)
50–69	23	(45)
≥70	6	(12)
Race (n = 27)		
White	25	(93)
Black	1	(4)
Asian	1	(4)
Symptoms§		
Cough	25	(56)
Headache	23	(53)
Dyspnea	22	(51)
Nausea	19	(48)
Fever	19	(42)
Weight loss	16	(40)
Vomiting	14	(35)
Fatigue	11	(34)
Loss of appetite	13	(33)
Chest pain	12	(28)
Muscle pain	11	(26)
Neck stiffness	8	(21)
Chills	8	(20)
Night sweats	7	(17)
Clinical findings§		
Pneumonia	24	(57)
Meningitis	17	(43)
Lung cryptococcomas	13	(34)
Brain cryptococcomas	3	(25)
Encephalitis	8	(22)
Predisposing conditions (n = 47)		
Had predisposing condition	38	(81)
HIV infection	3	(8)
Solid organ transplant¶	8	(21)
Other**	27	(71)
No predisposing condition	9	(19)
Hospitalization status (n = 44)		
Yes	39	(89)
No	5	(11)
Outcome (n = 45)		
Died from *C. gattii*	9	(20)
Died with *C. gattii*, from another cause	6	(13)
Survived, no response to treatment	10	(22)
Survived, partial response to treatment	5	(11)
Survived, recovered fully	3	(7)
Survived, status unknown	12	(27)

Abbreviation: HIV = human immunodeficiency virus.
Source: *Cryptococcus gattii* Public Health Working Group.
* Defined as illness occurring on or after January 1, 2004, in a U.S. resident with a culture-confirmed isolate of *C. gattii*.
† Categories might not add to 100% because of rounding.
§ Frequencies are reported among patients for whom specific information was available.
¶ Includes single or bilateral kidney (three patients), bilateral lung (two), liver (one), and heart (one).
** Among patients without HIV or solid organ transplant, includes the following: recent history of oral steroid use (21 patients), non-HIV immunosuppressive condition (16), lung disease (15), cancer (11), kidney disease (10), cardiovascular disease (nine), diabetes (eight), liver disease (five), rheumatic condition (five), and connective tissue disorder (three).

practitioners, physicians, and veterinarians. In 2010, for the first time, surveillance data for *C. gattii* were reported at the Council of State and Territorial Epidemiologists meeting. The *C. gattii* Public Health Working Group is continuing disease surveillance and planning to conduct speciation of banked isolates of *Cryptococcus*. Improved surveillance should enable better assessment of the incidence of the disease and also its clinical manifestation and course.

Physicians should consider *C. gattii* as a possible etiology of infection when treating patients (particularly those who are HIV negative) who have signs and symptoms of cryptococcal infection, and should ask patients about recent travel to the Pacific Northwest, British Columbia, or other *C. gattii*–endemic areas. Physicians, particularly in the Pacific Northwest, should report suspected *C. gattii* infections and submit clinical isolates to their state health departments when requested.

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References

1. Dixit A, Carroll SF, Qureshi ST. *Cryptococcus gattii*: an emerging cause of fungal disease in North America. Interdiscip Perspect Infect Dis 2009:840452. Epub May 25, 2009.
2. Datta K, Bartlett KH, Baer R, et al. Spread of *Cryptococcus gattii* into Pacific Northwest Region of the United States. Emerg Infect Dis 2009;15:1185–91.
3. Byrnes EJ III, Bildfell RJ, Frank SA, Mitchell TG, Marr KA, Heitman J. Molecular evidence that the range of the Vancouver Island outbreak of *Cryptococcus gattii* infection has expanded into the Pacific Northwest in the United States. J Infect Dis 2009;199:1081–6.
4. MacDougall L, Kidd SE, Galanis E, et al. Spread of *Cryptococcus gattii* in British Columbia, Canada, and detection in the Pacific Northwest, USA. Emerg Infect Dis 2007;13:42–50.
5. Galanis E, Macdougall L. Epidemiology of *Cryptococcus gattii*, British Columbia, Canada, 1999–2007. Emerg Infect Dis 2010;16:251–7.
6. Kidd SE, Chow Y, Mak S, et al. Characterization of environmental sources of the human and animal pathogen *Cryptococcus gattii* in British Columbia, Canada, and the Pacific Northwest of the United States. Appl Environ Microbiol 2007;73:1433–43.
7. Upton A, Fraser JA, Kidd SE, et al. First contemporary case of human infection with *Cryptococcus gattii* in Puget Sound: evidence for spread of the Vancouver Island outbreak. J Clin Microbiol 2007;45:3086–8.
8. Sorrell TC. *Cryptococcus neoformans* variety *gattii*. Med Mycol 2001;39:155–68.
9. Fyfe M, MacDougall L, Romney M, et al. *Cryptococcus gattii* infections on Vancouver Island, British Columbia, Canada: emergence of a tropical fungus in a temperate environment. Can Commun Dis Rep 2008;34:1–12.

La Crosse Virus Neuroinvasive Disease — Missouri, 2009

La Crosse virus (LACV), a California serogroup bunyavirus, is a leading cause of pediatric arboviral encephalitis in the United States and is transmitted primarily by the eastern treehole mosquito (*Aedes triseriatus*) (*1*). On August 7, 2009, the Missouri Department of Health and Senior Services (MDHSS) was notified of suspected LACV neuroinvasive disease in a boy aged 8 years from northwest Missouri. Laboratory testing at CDC confirmed LACV infection. An environmental inspection identified multiple vector habitats, including tree holes and discarded tires within a 300-foot radius of the patient's home. Although a median of 67 (range: 29–167) California serogroup virus neuroinvasive disease cases have been reported annually in the United States since 1964, mostly from upper Midwestern and mid-Atlantic states (*2*), this is the first reported case of LACV neuroinvasive disease in Missouri since 2002. *Ae. triseriatus* is found throughout Missouri and as far west as central Kansas and eastern Nebraska. Healthcare providers serving this region should maintain a high clinical suspicion for LACV among patients with unexplained meningoencephalitis occurring during summer and fall.

Case Report

On July 29, 2009, a previously healthy boy aged 8 years, who lived in Kansas City, Missouri, arrived at a local emergency department with headache, fatigue, nausea, vomiting, and abdominal pain. He was prescribed amoxicillin for presumed streptococcal pharyngitis. During the next 48 hours, he continued to have vomiting and developed fever and worsening headache, prompting a second emergency department visit on July 31. Physical examination revealed no focal neurologic signs, and a noncontrasted computed tomography of the head was unremarkable. Because of the child's fever, severe headache, and intractable vomiting, the physician transferred the patient to a pediatric hospital for admission on August 1 because of concerns about possible acute meningitis.

On examination at the pediatric hospital, the child's temperature was 104°F (40°C), with photophobia noted and neck pain with flexion. Neurologic examination, including mental status testing, was normal. Blood counts were remarkable for leukocytosis of 22,000/mm^3 with neutrophil predominance (89%). Cerebrospinal fluid (CSF) obtained through lumbar puncture revealed an elevated white blood cell count (182 cells/mm^3 [43% neutrophils, 40% lymphocytes, and 17% monocytes]), normal protein (31 mg/dL), and normal glucose (61 mg/dL). Polymerase chain reaction for enterovirus on CSF was negative. Vancomycin and ceftriaxone were initiated after lumbar puncture for possible bacterial meningitis.

Blood and CSF bacterial cultures remained negative. On August 3, the patient's serum and CSF were submitted to a referral laboratory for immunofluorescence assay (IFA) for antibodies against West Nile, eastern equine encephalitis, western equine encephalitis, St. Louis encephalitis, and California serogroup viruses. On August 7, results showed positive immunoglobulin M (IgM) and immunoglobulin G (IgG) against California serogroup viruses in serum and CSF. Because LACV is the most prevalent member of California serogroup viruses,* a presumptive diagnosis of LACV neuroinvasive disease was made. Antibiotics were discontinued. The patient's headache, neck pain, and abdominal pain improved during the course of admission, and he was discharged home on August 7. The patient remained healthy, and no neurologic abnormalities were detected through medical follow-up.

Public Health and Laboratory Investigations

MDHSS was notified of the case on August 7. The patient's parents were interviewed on August 13. The patient was the only child in this family, which lived in a house that had an air conditioner but no window screens. The mother reported that the patient had received multiple mosquito bites while playing in the woods near his home the week before symptom onset. He had no recent travel out of northwest Missouri. None of his family members were ill.

The patient's acute serum samples were not available from the hospital, and the parents did not consent to another blood draw. A sample of CSF collected during hospitalization was sent to CDC on September 3 and was reported positive by CDC

* The national surveillance case definition of California serogroup virus neuroinvasive disease is available from CDC at http://www.cdc.gov/ncphi/disss/nndss/casedef/arboviral_current.htm.

on September 23 for LACV neutralizing antibodies. A titer of 1:128 was reported based on results of a plaque-reduction neutralization test (PRNT) with a 90% cutoff value ($PRNT_{90}$). Convalescent serum collected on October 2 was reported positive by CDC on November 2 for LACV-specific IgM and IgG by capture enzyme-linked immunosorbent assay and for LACV neutralizing antibodies by PRNT. CDC tested the same serum sample for neutralizing antibodies against the closely related Jamestown Canyon virus by $PRNT_{90}$ to rule out potential cross-reactivity; the titers for LACV were 1:10,240, whereas the titers for Jamestown Canyon virus were 1:40. LACV infection was confirmed.

On November 11, an examination was conducted in a 300-foot radius around the patient's home to locate and count containers that might serve as habitats for mosquito larvae; 14 tree holes and eight discarded tires, one of which contained water and mosquito larvae, were identified.

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Editorial Note

Before the case reported here, LACV neuroinvasive disease was last reported in Missouri in 2002 (in a girl aged 10 years from northeastern Missouri) and 13 cases were reported in the state during 1973–2001. LACV neuroinvasive disease has never been reported in Kansas or Nebraska. However, identification of this LACV case in northwest Missouri, near the border with Kansas, increases concern that LACV disease might have been underrecognized and underreported in this region. Because *Ae. triseriatus* is found throughout Missouri and as far west as central Kansas and eastern Nebraska, health-care providers serving this region should maintain a high clinical suspicion for LACV among patients with unexplained meningoencephalitis during summer and fall, when mosquitoes are active.

This investigation identified two characteristic *Ae. triseriatus* habitats, tree holes and discarded tires, near the patient's home. Holes in trees near areas in which persons live are a risk factor for LACV neuroinvasive disease (*3,4*). The holes can collect water and become breeding sites for mosquitoes. Similarly, manufactured containers (e.g., tires and buckets) might increase the risk for LACV transmission by increasing local mosquito density around the residence (*3*).

LACV neuroinvasive disease was first described from La Crosse County, Wisconsin, after isolation of the virus in 1964 from brain tissue of a girl aged 4 years who had died of encephalitis in 1960 (*5,6*). The incubation period in humans ranges from 5 to 15 days. Common reservoirs of LACV are small mammals such as chipmunks and squirrels. LACV passes from the female *Ae. triseriatus* mosquito to the eggs she lays, survives in dormant eggs through the winter, and results in infectious adult mosquitoes in the spring. LACV causes an illness that often includes fever, headache, nausea, vomiting, seizures, and disorientation (*7*). Severe neuroinvasive disease occurs most frequently among children. Neurologic sequelae, including epilepsy, hemiparesis, and cognitive and neurobehavioral abnormalities, have been reported in 6%–15% of all diagnosed cases (*1*).

California serogroup virus neuroinvasive disease has been nationally notifiable since 1995; however, CDC has been collecting data on the etiologic agents of arboviral neuroinvasive disease, including California serogroup viruses, since 1964. The highest number of California serogroup virus cases was reported in 2002; during 2003–2007, a total of 412 cases were reported (range: 50–113 cases per year). During 2003–2007, 407 (99%) of the 412 California serogroup virus neuroinvasive disease cases reported to CDC were LACV; of the 398 LACV cases for which outcome was known, seven (2%) were fatal (*8*). The disease is likely underdiagnosed because it mimics other viral encephalitides (e.g., enteroviral and herpes virus encephalitides) (*1,9*).

During the 1960s and 1970s, most cases of LACV neuroinvasive disease were reported from states in the upper Midwest (Illinois, Indiana, Iowa, Minnesota, Ohio, and Wisconsin). Since the mid-1980s, more cases have been reported from mid-Atlantic states (North Carolina, Tennessee, Virginia, and West Virginia). The reason for the increase in cases reported outside the upper Midwest is unclear but might be related to changes in diagnosis, reporting, or the ecology of the vectors (*10*).

This report indicates that LACV neuroinvasive disease still can occur in Missouri. CDC

What is already known on this topic?

La Crosse virus (LACV) neuroinvasive disease is a mosquitoborne disease that occurs mostly in the upper midwestern and mid-Atlantic states.

What is added by this report?

A case of LACV neuroinvasive disease was confirmed in a boy aged 8 years in late 2009, the first case reported in Missouri since 2002.

What are the implications for public health practice?

This case indicates that LACV neuroinvasive disease still occurs in Missouri. Because the primary vector of LACV is found throughout Missouri and as far west as central Kansas and eastern Nebraska, LACV neuroinvasive disease should be considered among patients with unexplained meningoencephalitis in this region. The risk for LACV infection can be reduced by using mosquito repellents; wearing long sleeves, long pants, and socks; installing and repairing screens; filling tree holes; and removing standing water from containers.

recommendations to reduce the risk for LACV infection include using mosquito repellents; wearing long sleeves, long pants, and socks; installing and repairing screens; filling tree holes; and removing standing water from containers. When LACV disease is suspected or confirmed, health-care providers should promptly report the case to the state and local public health departments. A Food and Drug Administration (FDA)-cleared and commercially available kit providing indirect IFA to detect IgM and IgG antibodies against California serogroup viruses can be useful in making a presumptive diagnosis. The FDA-cleared, commercially available test was validated for use with serum samples only. Currently, no FDA-cleared immunoassays are available for detection of LACV-specific IgM or IgG antibodies in serum or CSF. Confirmatory serologic testing by PRNT performed in a public health reference laboratory is recommended to differentiate LACV from other California serogroup viruses (*1*). Testing for LACV and other arboviruses can be performed at certain state public health laboratories and at CDC's Arboviral Diseases Branch (telephone: 970-221-6400). More information is available from CDC at http://www.cdc.gov/lac/index.html.

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References

1. McJunkin JE, Minnich LL. La Crosse encephalitis and other California serogroup viruses. In: Feign RD, Cherry JD, eds. Textbook of pediatric infectious diseases. 6th ed. Philadelphia, PA: Saunders; 2009:2557–68.
2. CDC. La Crosse encephalitis. Atlanta, GA: US Department of Health and Human Services, CDC; 2009. Available at http://www.cdc.gov/lac. Accessed July 16, 2010.
3. Woodruff BA, Baron RC, Tsai TF. Symptomatic La Crosse virus infections of the central nervous system: a study of risk factors in an endemic area. Am J Epidemiol 1992;136:320–7.
4. Erwin PC, Jones TF, Gerhardt RR, et al. La Crosse encephalitis in eastern Tennessee: clinical, environmental, and entomological characteristics from a blinded cohort study. Am J Epidemiol 2002;155:1060–5.
5. Thompson WH, Evan AS. California encephalitis virus studies in Wisconsin. Am J Epidemiol 1965;81:230–44.
6. Thompson WH, Kalfayan B, Anslow RO. Isolation of California encephalitis group virus from a fatal human illness. Am J Epidemiol 1965;81:245–53.
7. McJunkin JE, de los Reyes EC, Irazuzta JE, et al. La Crosse encephalitis in children. N Engl J Med 2001;344:801–7.
8. Reimann CA, Hayes EB, DiGuiseppi C, et al. Epidemiology of neuroinvasive arboviral disease in the United States, 1999–2007. Am J Trop Med Hyg 2008;79:974–9.
9. Wurtz R, Paleologos N. La Crosse encephalitis presenting like herpes simplex encephalitis in an immunocompromised adult. Clin Infect Dis 2000;31:1113–4.
10. Haddow AD, Odoi A. The incidence risk, clustering, and clinical presentation of La Crosse virus infections in the eastern United States, 2003–2007. PLoS ONE 2009;4:e6145. Available at http://www.plosone.org/article/info%3adoi%2f10.1371%2fjournal.pone.0006145. Accessed July 21, 2010.

Gastrointestinal Anthrax after an Animal-Hide Drumming Event — New Hampshire and Massachusetts, 2009

On December 24, 2009, a woman aged 24 years from New Hampshire was confirmed to have gastrointestinal anthrax on the basis of clinical findings and a *Bacillus anthracis* blood culture isolate. Her symptoms began on December 5. One day before symptom onset, she had participated in a drumming event at a community organization's building where animal-hide drums of multiple ages and origins were played. This report describes the case and subsequent investigation, which identified 84 persons potentially exposed to anthrax, including those persons at the drumming event and those who lived or worked at the event site. Review of New Hampshire disease surveillance data and clinical microbiology records for periods before and after the event identified no additional anthrax cases. Initial qualitative environmental testing of the event site yielded three positive samples (two from drum heads and one composite sample of three electrical outlets in the main drumming room). Wider, targeted, semi-quantitative environmental testing of the site and additional drums yielded six positive samples (two from one drum and four from environmental locations in the building). These results suggested that aerosolization of spores from drumheads had occurred. All isolates obtained from environmental and drum samples matched the patient's isolate by multiple-locus variable-number tandem repeat analysis using eight loci (MLVA-8). Public health agencies and persons with exposure to animal-hide drums should be aware of the potential, although remote, risk for anthrax exposure associated with these drums.

The patient was a woman aged 24 years from New Hampshire, previously in good health. On December 4, 2009, she participated in a public "drumming circle" inside a community organization's building. These drumming circles typically involved 30–40 persons from the local community sitting in a circle and drumming or dancing. They occurred monthly and lasted approximately 2 hours. Many attendees brought their own drums, although the community organization had dozens of drums stored in the basement for use during these events.

A total of 72 persons attended the December 4 event, and a total of 59 drums were present, including 17 drums that participants brought from home. Volunteers set up drums and prepared a vegetarian meal; participants ate dinner in the main drumming room (Figure) before beginning the drumming circle, which lasted 2 hours.

The next day, December 5, the patient had the onset of influenza-like symptoms, with fever, diaphoresis, and myalgias. Over the next several days, she noted increasing head, neck, and back pain but did not seek medical care. On December 12, she developed worsening nausea, vomiting, and abdominal cramps with dizziness. On December 14, she went to a local walk-in clinic and was transported immediately to a nearby hospital emergency department. There, she complained of vomiting, lower abdominal tenderness that radiated posteriorly, "hunger pains," and minimally productive cough, but reported not having diarrhea, shortness of breath, pleuritic pain, dysuria, vaginal bleeding, or foreign travel.

Physical examination revealed orthostasis, mild tachycardia, and costovertebral tenderness, but no fever. Abdominal examination showed distension, but active bowel sounds and no tenderness. Laboratory testing indicated a white blood cell count of 43,000/mm^3 (normal: 3,900–11,000/mm^3) with 68% neutrophils, a hematocrit of 62% (normal: 34%–46%), slight hyponatremia (133 mEq/L [normal: 134–146 mEq/L]), and a blood urea nitrogen of 31 mg/dL (normal: 6–26 mg/dL) with normal creatinine (1.0 mg/dL). She was admitted to the hospital, blood cultures were obtained, and she was treated with ertapenem. Chest radiograph showed lungs well aerated bilaterally, with no infiltrates. Abdominal computed tomography revealed massive ascites, two edematous small bowel segments with highly irregular appearance, and multiple prominent retroperitoneal lymph nodes. She was taken for exploratory laparotomy, followed by a partial bowel resection. After surgery she was stabilized, and, the next day, transferred to a referral hospital. Later review of the bowel pathology by CDC demonstrated a nematode (*Enterobius vermicularis*) infection of the small intestine and appendix.

While the patient recovered at the referral hospital, on December 24, the diagnosis of gastrointestinal anthrax was made when the Massachusetts

FIGURE. Drums placed in an event room of a community organization building before a meal and drumming circle event* — New Hampshire, December 4, 2009

* Arrow indicates the one drum that remained positive for *Bacillus anthracis* during both rounds of environmental sampling.

Department of Public Health identified gram-positive rods from two December 15 blood cultures as *B. anthracis*. The department informed the New Hampshire Department of Health and Human Services (NHDHHS), CDC, and, as a matter of routine, the Federal Bureau of Investigation. NHDHHS notified surrounding states and began an epidemiologic investigation into the source of this infection on December 24.

Because the patient was too ill to be interviewed, investigators interviewed her family and friends and later corroborated information with the patient after she was extubated on January 4, 2010. She was vegan and had participated occasionally in organic farming, most recently in September 2009. She had attended the drumming event on December 4, but had not participated in any previous such events. At the event, she drank bottled water she had brought from home and ate bagged bread that had been donated by a local bakery. She brought her own synthetic-head drum but also played one animal-hide drum, which, in a subsequent interview, she was not able to identify.

To identify other anthrax cases, NHDHHS queried statewide surveillance systems (Automated Hospital Emergency Department Data System and Vital Records Death Data) for clinical syndromes compatible with anthrax* for the period October 1, 2009 through February 3, 2010. Clinical microbiology laboratories in the New Hampshire Laboratory Response Network (LRN) were asked to review all gram-positive rod isolates from October 1, 2009 through December 26, 2009. Neither search identified additional cases.

On December 26, NHDHHS investigators performed an initial qualitative environmental sampling at the event site for the presence of *B. anthracis* spores. A total of 54 drums were sampled, one sample from each of 35 drums and two composite samples from seven drums, all from the site building's basement. In addition, samples were collected from two drums at the patient's home (the patient's synthetic drum and her mother's animal-hide drum, both used at the event) and 10 drums from a community member. Also, six environmental samples were collected from the event site. All samples were tested for *B. anthracis* at the New Hampshire Public Health Laboratory (NHPHL) using LRN protocol.

Three samples from the event site grew *B. anthracis* (two from drums and one from a composite sample of three electrical outlets in the room where the drumming circle took place) (Table). The patient denied direct contact with either of the contaminated drums during the event. One of the positive drums, estimated to be 10–15 years old, was made of cowhide, with hair

* Cutaneous (e.g., ulcer and swelling), gastrointestinal (e.g., fever, nausea, abdominal pain, and diarrhea), inhalation (e.g., fever, chest pain, dyspnea, and shortness of breath), and specific codes from the *International Classification of Diseases, Ninth Revision* (ICD-9).

TABLE. Results for *Bacillus anthracis* testing of specimens collected during first and second rounds of environmental sampling* during an epidemiologic investigation — New Hampshire and Massachusetts, December 2009–January 2010

Date	Type (No. of specimens)	Location of specimen	Results
First round testing (qualitative)†			
12/26/09	Drum (1)	Basement of event site	Positive
12/26/09	Drum (1)	Basement of event site	Positive
12/26/09	Composite of three electrical outlets (1)	Event room of event site	Positive
12/26/09	Drums (35)	Basement of event site	None detected
12/26/09	Composite of three electrical outlets (1)	Basement of event site	None detected
12/26/09	Air (3)	Basement and event room of event site	None detected
12/26/09	Floor (1)	Event room of event site	None detected
12/26/09	Drum (2)	Living room of patient's house	None detected
12/28/09	Drum (10)	Living room of community member	None detected
Second round testing (semi-quantitative)§			
01/07/10	Drum (1)	First drum head from previously positive double-headed drum in basement of event site	10^2 CFU¶/Sample
01/07/10	Drum (1)	Second drum head from previously positive double-headed drum in basement of event site	10^2 CFU/Sample
01/07/10	Environmental (1)	Baseboard heater of event room of event site	10^1 CFU/Sample
01/07/10	Environmental (1)	Upper surface of cabinets in community kitchen of event site	10^1 CFU/Sample
01/07/10	Environmental (1)	Computer screen from office of event site	10^1 CFU/Sample
01/07/10	Environmental (1)	Computer tower fan from office of event site	10^1 CFU/Sample
01/07/10	Environmental (8)	Basement food pantry of event site	None detected
01/07/10	Environmental (7)	Basement storage room of event site	None detected
01/07/10	Drum (1)	Previously positive drum in basement of event site	None detected
01/07/10	Environmental (1)	Community resource room of event site	None detected
01/07/10	Environmental (5)	Community kitchen of event site	None detected
01/07/10	Environmental (7)	Community living room of event site	None detected
01/07/10	Environmental (2)	Community bathroom of event site	None detected
01/07/10	Environmental (9)	Event room of event site	None detected
01/07/10	Environmental (1)	Office of event site	None detected
01/07/10	Environmental (1)	Private kitchen of event site	None detected
01/07/10	Environmental (1)	Private living room of event site	None detected
01/07/10	Environmental (3)	Private bathroom of event site	None detected
01/07/10	Environmental (1)	Private hallway of event site	None detected
01/07/10	Environmental (2)	Stairs to second floor of event site	None detected
01/07/10	Environmental (2)	Hallway of second floor of event site	None detected
01/07/10	Environmental (18)	Resident's rooms of event site	None detected
01/08/10	Drum (11)	Drop-off location for community drums	None detected

* The total number of drums tested during this investigation is not reflected in this table because some specimens represent a composite sample of two or more drums.
† Conducted by New Hampshire Department of Health and Human Services (NHDHHS).
§ Conducted by NHDHHS, Environmental Protection Agency, and CDC's National Institute for Occupational Safety and Health.
¶ Colony-forming units.

on the top and bottom surfaces. It was nearly 3 feet tall, had been purchased 3–4 years earlier at an estate sale, and was thought to have been manufactured in Mali. It was meant to be played with mallets and had been stored in the basement since 2007. During 2007–2009, it was played approximately once a month. The second contaminated drum was a much smaller, tambourine-like drum (6 inches in diameter and 2 inches wide) that had been bought at an antique shop 12–15 years earlier, stored in the basement for the preceding 9 years, and was played only rarely. Neither of these drums had been repaired or altered since they were acquired. Investigators quarantined the event site on December 28, 2009.

B. anthracis isolates from the patient, drums, and environment were sent to CDC for genotyping using MLVA-8. They were identical and mapped within cluster A1.a (*1*), with a combination of alleles that was unique in the CDC database.

The epidemiologic investigation of persons associated with the drumming event began December 28. NHDHHS attempted to contact all 210 persons considered potentially associated with the event (168 guests, four workers, 28 volunteers, eight residents, and two overnight guests). Of these 210 persons, 23 did not respond and 187 were interviewed. Of the 187 persons interviewed, 84 were considered potentially exposed (i.e., being at the event, setting up just

before the event, or living or working at the event site) and were offered postexposure prophylaxis (PEP) for anthrax, consisting of antimicrobial agents (oral doxycycline or ciprofloxacin for 60 days from last potential respiratory exposure) and anthrax vaccine adsorbed, the latter under an investigational new drug (IND) protocol.† Of the 84 persons offered PEP, one (1%) accepted antibiotics and vaccine, 36 (43%) accepted antibiotics, 26 (31%) declined, and 21 (25%) were lost to follow-up.

The New Hampshire Department of Environmental Services, the U.S. Environmental Protection Agency, and CDC's National Institute for Occupational Safety and Health collaborated to develop and conduct wider, targeted, semi-quantitative environmental testing that would provide *B. anthracis* spore surface contamination data to characterize the extent and type of contamination (i.e., by surface contact or potential aerosolization). On January 7 and 8, 2010, samples were taken from drums with previous positive results plus untested drums from the community that had been used at the event (i.e., persons brought their drums in to be tested) and the event site. NHPHL consulted and collaborated with New York City, Connecticut, Virginia, and Tennessee LRN laboratories to process and test 86 samples. The LRN environmental procedure used was semi-quantitative (i.e., it determined colony counts to assess heavy versus light bacterial load). Traditional microbiologic culture methods were performed, followed by confirmatory polymerase chain reaction (PCR) testing on suspicious colonies. The results of final testing revealed six positive samples from the event site (Table and Figure). MLVA-8 genotyping of all *B. anthracis* isolates from final testing matched previous isolates.

The patient was discharged from the hospital after nearly 2 months and was doing well at the time of this report. The community building, site of the drumming event, underwent remediation§ during which the two drums with positive results were properly disposed of. All drums with a result of "none detected" were returned to their owners, and the community building was reopened in April 2010.

† Additional information available at http://www.cdc.gov/vaccines/recs/acip/downloads/min-oct08.pdf.

§ Remediation of the building and positive drums included decontamination of all surfaces with a combination of scrubbing and rinsing with an amended bleach solution and HEPA-filtered vacuuming. Appropriate waste disposal protocols were followed, and post-remediation testing was performed.

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Editorial Note

The anthrax case described in this report is the first related to animal-hide drum exposures to involve the gastrointestinal form of the disease. The investigation suggests that the patient was exposed to *B. anthracis* spores aerosolized at the drumming event, which did not result in inhalation anthrax but did result in gastrointestinal anthrax. Infection through the gastrointestinal route might have occurred through direct aerosol exposure; animal studies have demonstrated that most inhaled spores are cleared from the respiratory tract and passed into the gastrointestinal tract (*2*). Additionally, intestinal lesions have been described in inhalation animal model studies (*2*). Alternatively, the patient could have consumed food or water contaminated with spores by aerosol, or through contact with persons who previously handled contaminated items. Environmental sampling results suggested that other persons present likely were exposed; however, no other anthrax cases were identified through follow-up with attendees of the drumming event or statewide surveillance systems review.

Gastrointestinal anthrax cases and exposures have been reported only rarely in the United States, including a case with both cutaneous and gastrointestinal involvement related to industrial exposure (*3*), and exposure through ingestion of contaminated meat from an animal with anthrax (*4*). Recent inhalation and cutaneous anthrax cases have occurred in drum makers working with animal hides contaminated with *B. anthracis* spores, including a 2006 inhalation anthrax case in New York City (*5*), cutaneous anthrax cases in 2007 in Connecticut (*6*), and a 2008

What is already known on this topic?

Cases of cutaneous and inhalation anthrax have been reported in persons who made or handled imported animal-hide drums or participated in drumming events where imported animal-hide drums contaminated with *Bacillus anthracis* spores were used.

What does this report add?

The anthrax case described is the first related to animal-hide drum exposures to involve the gastrointestinal form of the disease. The investigation suggests that the patient was exposed to *B. anthracis* spores aerosolized at a drumming event, which did not result in inhalation anthrax but did result in gastrointestinal anthrax.

What are the implications for public health practice?

When investigating any anthrax case, public health agencies should consider any exposure to animal-hide drums (making drum, playing drums, or participating in drumming events) as potential exposure sources. Detection of unknown gram-positive bacilli from patients with illnesses consistent with *B. anthracis* infection should result in immediate notification of the health-care provider, and health-care providers, laboratorians, and public health officials should ensure that a definitive diagnosis is reached promptly.

inhalation anthrax case in England (*7*). Widespread spore contamination was detected in the New York City and Connecticut drum makers' workspaces, with secondary contamination of their residences (*5,6*). In the English case, only one drum and two animal-hide pieces were contaminated (*7*). In 2006, a Scottish man died of inhalation anthrax after exposure to contaminated drums at a drumming workshop. Spores were detected at the workshop site, but his was the only anthrax case among the participants, and his history of acute myeloid leukemia in remission might have contributed to his disease.[¶]

The patient described in this report was the only person exposed at the drumming event who is known to have become ill. Whether underlying immunologic factors were present or her *Enterobius* infection contributed through mucosal injury remains unclear. Her case and the 2006 Scottish case might represent persons with unique susceptibilities to *B. anthracis*. She developed anthrax after exposure to environments with neither widespread nor a high level of contamination detected. Notably, the drums used at the event had long histories of use by other persons who were not known to develop anthrax. Other published reports of anthrax exist in persons for whom documented exposure was brief or to a low level of contamination. In some instances, like the case described in this report, several persons were exposed to either the same contaminated environments or articles, but did not acquire disease (*8*). The oral infectious dose for gastrointestinal anthrax in humans is not known. Whereas oral minimum ID50 dose estimates in humans or animal models range up to 10^{11} spores, the infectious dose by any route at which a small proportion of the population will be infected is much lower; for inhalation anthrax the ID2 might be as low as nine to 2,300 spores (*8,9*).

The risk for infection posed by handling animal-hide drums, or attending events where such drums are played, is difficult to quantify. Drumming circles are common activities, and given the extreme rarity of cases like the one reported here, the risk for infection must be considered to be very low. Because of livestock management practices and inspection at U.S. animal processing plants, animal hides originating in the United States are less likely to be contaminated with *B. anthracis* than hides or drums imported from areas of epizootic anthrax (*7*). Physicians treating patients with symptoms compatible with anthrax, such as unexplained fever, skin lesions, or serious respiratory or gastrointestinal illness, should be aware of the possible connection to animal-hide drums. When unknown gram-positive bacilli are detected in patients with illnesses consistent with *B. anthracis* infection, the health-care provider should be notified immediately, and health-care providers, laboratorians, and public health officials should ensure that a definitive diagnosis is reached promptly.

Acknowledgments

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[¶] Additional information available at http://www.nhsborders.org.uk/uploads/18645/anthrax_report_131207.pdf.

References

1. Keim P, LB Price, AM Klevytska, et al. Multiple-locus variable-number tandem repeat analysis reveals genetic relationships within *Bacillus anthracis*. J Bacteriol 2000;182:2928–36.
2. Fritz DL, Jaax NK, Lawrence WB, et al. Pathology of experimental inhalation anthrax in the rhesus monkey. Lab Invest 1995;73:691–702.
3. MacDonald WD. Anthrax: report of a fatal case involving the cutaneous and gastrointestinal systems. N Engl J Med 1942;226:949–51.
4. CDC. Human ingestion of *Bacillus anthracis*-contaminated meat—Minnesota, August 2000. MMWR 2000;49:813–6.
5. CDC. Inhalation anthrax associated with dried animal hides—Pennsylvania and New York City, 2006. MMWR 2006;55:280–2.
6. CDC. Cutaneous anthrax associated with drum making using goat hides from West Africa—Connecticut, 2007. MMWR 2008;57:628–31.
7. Anaraki S, Addiman S, Nixon G, et al. Investigations and control measures following a case of inhalation anthrax in East London in a drum maker and drummer, October 2008. Euro Surveill 2008;13:19076.
8. Watson A, Keir D. Information on which to base assessments of risk from environments contaminated with anthrax spores. Epidemiol Infect 1994;113:479–90.
9. World Health Organization. Anthrax in humans and animals. 4th ed. Geneva, Switzerland: World Health Organization; 2008. Available at http://www.who.int/csr/resources/publications/AnthraxGuidelines2008/en/index.html. Accessed July 20, 2010.

Notes from the Field

Dengue Epidemic — Puerto Rico, January–July 2010

During January 1–July 15, 2010, a total of 6,321 suspected dengue cases were reported to the Puerto Rico Department of Health (PRDH) and CDC's Dengue Branch Passive Dengue Surveillance System, compared with 2,711 cases reported during the same period in 2009. The increase in cases began in January. In late February, when the number of reported cases exceeded the epidemic threshold for 2 consecutive weeks, PRDH declared a dengue epidemic. Dengue has been endemic in Puerto Rico for 4 decades (*1*). Although the timing of the current epidemic is unusually early (in Puerto Rico, increases in dengue cases typically occur during the June–November rainy season), the number of cases reported is large, and comparable to the 6,428 cases reported for the same period during a substantial epidemic in 1998 (*2*).

Of the 6,321 suspected cases, 2,831 (45%) have been laboratory-confirmed. During January–July 2010, the incidence of confirmed dengue was 74.3 cases per 100,000 population, with 35% of patients hospitalized and five deaths reported, all in adults. Incidence of laboratory-confirmed cases was highest among children aged 10–14 years (165 cases per 100,000), 15–19 years (163), and 5–9 years (91), followed by infants (83), and adults aged 20–24 years (77). The epidemic is widespread; of 78 municipalities in Puerto Rico, 72 had confirmed cases in June. Of the 2,831 laboratory-confirmed cases, 2,001 cases (71%) were positive by dengue virus (DENV) real-time reverse transcription–polymerase chain reaction (RT-PCR); 830 were positive for anti-DENV immunoglobulin M. Among RT-PCR positive cases, DENV-1 serotype (1,505) and DENV-4 (344) were detected more frequently than DENV-2 (150) and DENV-3 (two).

Large, island-wide epidemics occur every 3–5 years in Puerto Rico; in the most recent (2007), 10,508 suspected cases were reported (*3*). Abnormally high ambient temperature might be a factor in the high incidence in 2010, and, more importantly, a large proportion of the population might be susceptible to the predominant DENV-1 and DENV-4 serotypes (*3*). PRDH and CDC Dengue Branch are working with municipal leadership to raise awareness about prevention measures and eliminate mosquito production sites, and are providing continuing medical education on dengue clinical management and educational materials for patients.

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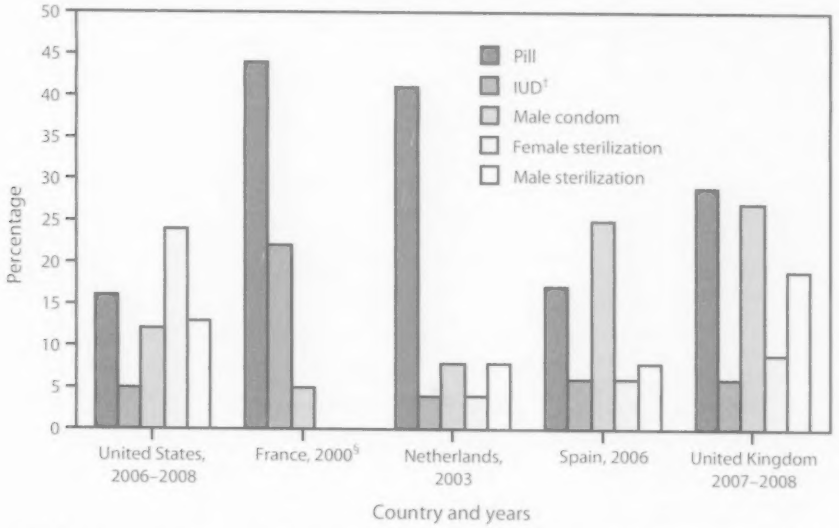
References

1. Likosky WH, Calisher CH, Michelson AL, Correa-Coronas R, Henderson BE, Feldman RA. An epidemiologic study of dengue type 2 in Puerto Rico, 1969. Am J Epidemiol 1973;97:264–75.
2. Rigau-Perez JG, Ayala-Lopez A, Garcia-Rivera EJ, et al. The reappearance of dengue-3 and a subsequent dengue-4 and dengue-1 epidemic in Puerto Rico in 1998. Am J Trop Med Hyg 2002;67:355–62.
3. Tomashek KM, Rivera A, Munoz JL, et al. Description of a large island-wide outbreak of dengue in Puerto Rico, 2007. Am J Trop Med Hyg 2009;81:467–74.

QuickStats

FROM THE NATIONAL CENTER FOR HEALTH STATISTICS

Use of Selected Contraceptive Methods by Married Women of Childbearing Age in the United States, 2006–2008, Compared with Married Women in Selected Countries with Low Fertility Rates,* 2000–2008



* France, the Netherlands, Spain, and the United Kingdom. These countries were selected because they have birth rates and abortion rates lower than the United States and because they have comparable data on contraception among married women from a large national survey. Data are from a United Nations compilation of national survey data. Results are based on large samples and are adjusted to national totals in each country. Additional information is available at http://www.cdc.gov/nchs/data/series/sr_23/sr23_029.pdf. Low fertility is defined as a total fertility rate (TFR) of ≤2.1. TFR is the average number of births per woman, based on current age-specific birth rates. In 2006, the TFR in the United States was approximately 2.1 children per woman. A TFR of 2.1 is the replacement value of a population (i.e., the rate, without migration, at which the number of persons in a population would be stable).

† Intrauterine device.

§ Data not available on use of male and female sterilization in France in 2000.

Among countries with low fertility (total fertility rates of ≤2.1), a higher percentage of married women of childbearing age in the United States rely on female sterilization (24%) as their method of contraception, compared with women in other countries (range: 4%–9%). Women in France, the Netherlands, and the United Kingdom are more likely to rely on oral contraception (29%–44%) than women in the United States (16%). Women in France use the IUD (22%) to a greater extent than women in the United States (5%), whereas the male condom is used by partners of approximately 25% of married women in Spain and the United Kingdom, nearly twice the percentage found in the United States.

Source: Mosher WD, Jones J. Use of contraception in the United States: 1982–2008. Vital Health Stat 2010;23(29). Available at http://www.cdc.gov/nchs/data/series/sr_23/sr23_029.pdf.

Notifiable Diseases and Mortality Tables

TABLE I. Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending July 17, 2010 (28th week)*

Disease	Current week	Cum 2010	5-year weekly average†	Total cases reported for previous years 2009	2008	2007	2006	2005	States reporting cases during current week (No.)
Anthrax	—	—	—	1	—	1	1	—	
Botulism, total	—	39	3	118	145	144	165	135	
foodborne	—	4	0	10	17	32	20	19	
infant	—	27	2	83	109	85	97	85	
other (wound and unspecified)	—	8	1	25	19	27	48	31	
Brucellosis	3	61	2	115	80	131	121	120	MN (2), FL (1)
Chancroid	—	26	0	28	25	23	33	17	
Cholera	—	2	0	10	5	7	9	8	
Cyclosporiasis§	9	85	8	141	139	93	137	543	FL (9)
Diphtheria	—	—	—	—	—	—	—	—	
Domestic arboviral diseases§,¶:									
California serogroup virus disease	—	2	3	55	62	55	67	80	
Eastern equine encephalitis virus disease	—	1	0	4	4	4	8	21	
Powassan virus disease	—	1	0	6	2	7	1	1	
St. Louis encephalitis virus disease	—	1	0	12	13	9	10	13	
Western equine encephalitis virus disease	—	—	—	—	—	—	—	—	
Haemophilus influenzae,** invasive disease (age <5 yrs):									
serotype b	—	7	0	35	30	22	29	9	
nonserotype b	1	108	4	236	244	199	175	135	FL (1)
unknown serotype	2	122	3	178	163	180	179	217	OH (1), FL (1)
Hansen disease§	—	18	1	103	80	101	66	87	
Hantavirus pulmonary syndrome§	—	8	1	20	18	32	40	26	
Hemolytic uremic syndrome, postdiarrheal§	1	78	7	242	330	292	288	221	MO (1)
HIV infection, pediatric (age <13 yrs)††	—	—	1	—	—	—	—	380	
Influenza-associated pediatric mortality§,§§	—	54	1	359	90	77	43	45	
Listeriosis	12	327	20	851	759	808	884	896	NY (3), PA (1), OH (1), MO (2), NE (1), FL (1), CA (3)
Measles¶¶	—	30	2	71	140	43	55	66	
Meningococcal disease, invasive***:									
A, C, Y, and W-135	1	141	4	301	330	325	318	297	FL (1)
serogroup B	1	65	3	174	188	167	193	156	WA (1)
other serogroup	—	7	0	23	38	35	32	27	
unknown serogroup	4	221	10	482	616	550	651	765	FL (2), OR (1), CA (1)
Mumps	9	2,183	17	1,991	454	800	6,584	314	NY (3), NYC (4), PA (1), CO (1)
Novel influenza A virus infections†††	—	1	0	43,771	2	4	NN	NN	
Plague	—	—	0	8	3	7	17	8	
Poliomyelitis, paralytic	—	—	—	1	—	—	—	1	
Polio virus infection, nonparalytic§	—	—	—	—	—	—	NN	NN	
Psittacosis§	—	4	0	9	8	12	21	16	
Q fever, total§,§§§	4	59	3	114	120	171	169	136	
acute	4	48	1	94	106	—	—	—	NY (1), MN (1), TN (1), CA (1)
chronic	—	11	0	20	14	—	—	—	
Rabies, human	—	—	—	4	2	1	3	2	
Rubella¶¶¶	—	6	0	3	16	12	11	11	
Rubella, congenital syndrome	—	—	—	2	—	—	1	1	
SARS-CoV§,****	—	—	—	—	—	—	—	—	
Smallpox§	—	—	—	—	—	—	—	—	
Streptococcal toxic-shock syndrome§	—	100	2	161	157	132	125	129	
Syphilis, congenital (age <1 yr)††††	—	88	8	423	431	430	349	329	
Tetanus	—	1	0	18	19	28	41	27	
Toxic-shock syndrome (staphylococcal)§	—	44	2	74	71	92	101	90	
Trichinellosis	—	1	1	13	39	5	15	16	
Tularemia	—	34	5	93	123	137	95	154	
Typhoid fever	3	182	7	397	449	434	353	324	VA (1), FL (2)
Vancomycin-intermediate *Staphylococcus aureus*§	—	53	1	78	63	37	6	2	
Vancomycin-resistant *Staphylococcus aureus*§	—	1	—	1	—	2	1	3	
Vibriosis (noncholera *Vibrio* species infections)§	13	191	11	789	588	549	NN	NN	OH (2), MD (3), FL (6), AZ (1), WA (1)
Viral hemorrhagic fever§§§§	—	1	—	NN	NN	NN	NN	NN	
Yellow fever	—	—	—	—	—	—	—	—	

See Table I footnotes on next page.

TABLE I. (*Continued*) Provisional cases of infrequently reported notifiable diseases (<1,000 cases reported during the preceding year) — United States, week ending July 17, 2010 (28th week)*

—: No reported cases. N: Not reportable. NN: Not Nationally Notifiable Cum: Cumulative year-to-date counts.

* Incidence data for reporting years 2009 and 2010 are provisional, whereas data for 2005 through 2008 are finalized.

† Calculated by summing the incidence counts for the current week, the 2 weeks preceding the current week, and the 2 weeks following the current week, for a total of 5 preceding years. Additional information is available at http://www.cdc.gov/ncphi/disss/nndss/phs/files/5yearweeklyaverage.pdf.

§ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table except starting in 2007 for the domestic arboviral diseases, STD data, TB data, and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/ncphi/disss/nndss/phs/infdis.htm.

¶ Includes both neuroinvasive and nonneuroinvasive. Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for West Nile virus are available in Table II.

** Data for *H. influenzae* (all ages, all serotypes) are available in Table II.

†† Updated monthly from reports to the Division of HIV/AIDS Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. Implementation of HIV reporting influences the number of cases reported. Updates of pediatric HIV data have been temporarily suspended until upgrading of the national HIV/AIDS surveillance data management system is completed. Data for HIV/AIDS, when available, are displayed in Table IV, which appears quarterly.

§§ Updated weekly from reports to the Influenza Division, National Center for Immunization and Respiratory Diseases. Since April 26, 2009, a total of 286 influenza-associated pediatric deaths associated with 2009 influenza A (H1N1) virus infection have been reported. Since August 30, 2009, a total of 279 influenza-associated pediatric deaths occurring during the 2009–10 influenza season have been reported. A total of 133 influenza-associated pediatric deaths occurring during the 2008-09 influenza season have been reported.

¶¶ No measles cases were reported for the current week.

*** Data for meningococcal disease (all serogroups) are available in Table II.

††† CDC discontinued reporting of individual confirmed and probable cases of 2009 pandemic influenza A (H1N1) virus infections on July 24, 2009. During 2009, three cases of novel influenza A virus infections, unrelated to the 2009 pandemic influenza A (H1N1) virus, were reported to CDC. The one case of novel influenza A virus infection reported to CDC during 2010 was identified as swine influenza A (H3N2) virus and is unrelated to pandemic influenza A (H1N1) virus.

§§§ In 2009, Q fever acute and chronic reporting categories were recognized as a result of revisions to the Q fever case definition. Prior to that time, case counts were not differentiated with respect to acute and chronic Q fever cases.

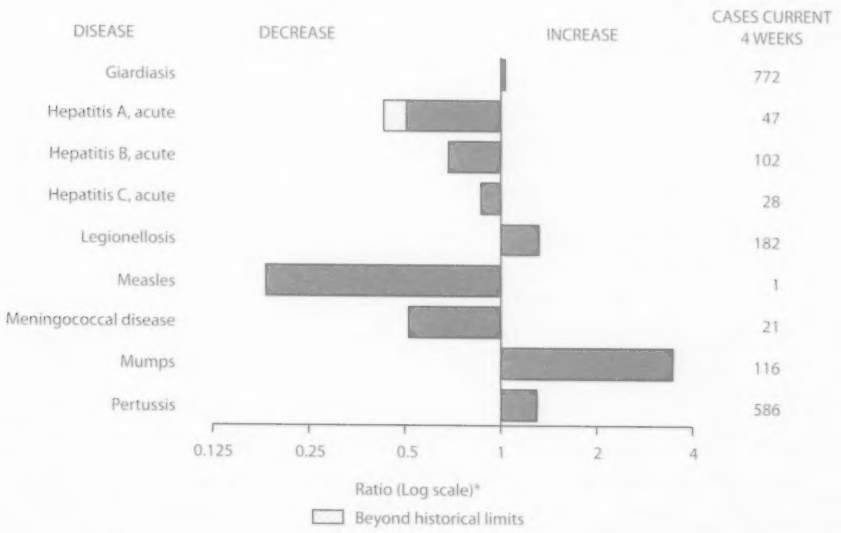
¶¶¶ No rubella cases were reported for the current week.

**** Updated weekly from reports to the Division of Viral and Rickettsial Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases.

†††† Updated weekly from reports to the Division of STD Prevention, National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention.

§§§§ There was one case of viral hemorrhagic fever reported during week 12. The one case report was confirmed as lassa fever. See Table II for dengue hemorrhagic fever.

FIGURE I. Selected notifiable disease reports, United States, comparison of provisional 4-week totals July 17, 2010, with historical data



* Ratio of current 4-week total to mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

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TABLE II. Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	*Chlamydia trachomatis* infection					Cryptosporidiosis				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	11,253	22,256	26,080	578,350	673,573	95	119	284	2,960	3,084
New England	495	741	1,396	19,715	21,423	4	8	46	203	193
Connecticut	—	210	736	4,023	6,315	—	0	40	40	38
Maine†	57	48	75	1,329	1,342	—	1	4	32	18
Massachusetts	367	395	638	10,700	10,163	3	3	15	59	64
New Hampshire	39	38	119	1,186	1,126	—	1	6	31	33
Rhode Island†	—	70	130	1,821	1,840	—	0	8	8	4
Vermont†	32	23	63	656	637	1	1	9	33	36
Mid. Atlantic	2,729	3,190	4,619	88,247	84,049	14	15	38	330	348
New Jersey	374	447	643	12,118	13,326	—	0	5	—	24
New York (Upstate)	612	657	2,530	17,555	15,419	2	3	16	70	70
New York City	1,265	1,179	2,144	33,886	31,730	—	1	5	31	45
Pennsylvania	478	870	1,090	24,688	23,574	12	9	19	229	209
E.N. Central	533	3,584	4,413	89,857	109,251	16	29	73	690	752
Illinois	17	880	1,322	19,682	33,336	—	3	8	83	75
Indiana	—	350	773	9,163	12,702	—	4	11	88	142
Michigan	419	889	1,417	25,850	25,390	7	6	11	153	129
Ohio	97	960	1,077	24,682	26,349	9	7	16	195	199
Wisconsin	—	403	495	10,480	11,474	—	9	39	171	207
W.N. Central	295	1,313	1,651	34,195	38,316	23	21	59	499	436
Iowa	20	182	295	5,249	5,250	4	4	13	113	103
Kansas	2	192	381	4,810	5,719	4	2	6	57	42
Minnesota	1	270	337	7,097	7,832	1	4	31	98	101
Missouri	209	493	638	13,374	14,138	9	3	18	105	85
Nebraska†	63	95	237	2,667	2,851	4	2	9	62	45
North Dakota	—	34	93	998	899	1	0	16	12	6
South Dakota	—	0	82	—	1,627	—	2	10	52	54
S. Atlantic	2,647	3,738	5,681	94,542	139,159	9	19	51	470	502
Delaware	68	87	156	2,287	2,594	—	0	2	2	1
District of Columbia	—	102	178	2,613	3,914	—	0	1	2	4
Florida	587	1,405	1,669	38,752	40,225	6	8	24	192	156
Georgia	—	342	1,323	5,749	22,359	1	6	31	167	200
Maryland†	541	452	1,031	12,114	12,168	2	1	3	15	23
North Carolina	—	348	908	—	23,691	—	1	7	11	56
South Carolina†	762	518	692	14,736	15,090	—	1	7	26	23
Virginia†	636	592	924	16,371	17,045	—	2	7	49	33
West Virginia	53	67	137	1,920	2,073	—	0	2	6	6
E.S. Central	1,581	1,720	2,377	46,112	50,474	9	4	10	102	94
Alabama†	490	475	655	13,179	15,109	—	1	5	36	32
Kentucky	273	321	642	8,561	6,397	6	1	4	35	22
Mississippi	359	424	784	10,017	12,944	—	0	3	6	8
Tennessee†	459	556	734	14,355	16,024	3	1	5	25	32
W.S. Central	606	2,879	4,578	77,516	88,142	6	8	40	155	171
Arkansas†	355	231	402	4,770	7,720	—	1	5	17	21
Louisiana	—	279	1,055	2,922	16,062	—	1	6	17	17
Oklahoma	227	262	1,564	7,999	6,839	5	2	9	41	37
Texas†	24	2,127	3,210	61,825	57,521	1	5	30	80	96
Mountain	473	1,533	2,118	38,523	39,751	3	9	25	227	257
Arizona	75	489	713	12,306	13,939	—	0	3	15	23
Colorado	216	414	709	10,110	7,914	3	2	10	64	64
Idaho†	—	64	192	1,576	1,954	—	2	7	43	40
Montana†	32	58	77	1,592	1,641	—	1	4	29	20
Nevada†	144	175	478	5,278	5,312	—	0	2	8	9
New Mexico†	—	165	453	3,620	4,531	—	2	8	35	70
Utah	—	117	175	3,062	3,399	—	1	4	24	16
Wyoming†	6	35	70	979	1,061	—	0	2	9	15
Pacific	1,894	3,482	5,350	89,643	103,008	11	12	27	284	331
Alaska	—	105	146	3,027	2,870	—	0	1	2	2
California	1,644	2,735	4,406	72,476	78,995	8	8	20	167	183
Hawaii	—	113	159	2,728	3,349	—	0	0	—	1
Oregon	—	150	468	1,367	5,910	1	2	10	76	107
Washington	250	388	638	10,045	11,884	2	1	8	39	38
American Samoa	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	—	4	27	108	223	—	0	0	—	—
Puerto Rico	—	96	266	2,694	4,395	N	0	0	N	N
U.S. Virgin Islands	—	8	15	132	311	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	Dengue Virus Infection									
	Dengue Fever†					Dengue Hemorrhagic Fever§				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	—	0	8	88	NN	—	0	1	1	NN
New England	—	0	1	1	NN	—	0	0	—	NN
Connecticut	—	0	0	—	NN	—	0	0	—	NN
Maine¶	—	0	1	1	NN	—	0	0	—	NN
Massachusetts	—	0	0	—	NN	—	0	0	—	NN
New Hampshire	—	0	0	—	NN	—	0	0	—	NN
Rhode Island¶	—	0	0	—	NN	—	0	0	—	NN
Vermont¶	—	0	0	—	NN	—	0	0	—	NN
Mid. Atlantic	—	0	4	24	NN	—	0	0	—	NN
New Jersey	—	0	0	—	NN	—	0	0	—	NN
New York (Upstate)	—	0	0	—	NN	—	0	0	—	NN
New York City	—	0	4	20	NN	—	0	0	—	NN
Pennsylvania	—	0	2	4	NN	—	0	0	—	NN
E.N. Central	—	0	2	5	NN	—	0	0	—	NN
Illinois	—	0	0	—	NN	—	0	0	—	NN
Indiana	—	0	0	—	NN	—	0	0	—	NN
Michigan	—	0	0	—	NN	—	0	0	—	NN
Ohio	—	0	2	5	NN	—	0	0	—	NN
Wisconsin	—	0	0	—	NN	—	0	0	—	NN
W.N. Central	—	0	1	1	NN	—	0	0	—	NN
Iowa	—	0	1	1	NN	—	0	0	—	NN
Kansas	—	0	0	—	NN	—	0	0	—	NN
Minnesota	—	0	0	—	NN	—	0	0	—	NN
Missouri	—	0	0	—	NN	—	0	0	—	NN
Nebraska¶	—	0	0	—	NN	—	0	0	—	NN
North Dakota	—	0	0	—	NN	—	0	0	—	NN
South Dakota	—	0	0	—	NN	—	0	0	—	NN
S. Atlantic	—	0	7	47	NN	—	0	1	1	NN
Delaware	—	0	0	—	NN	—	0	0	—	NN
District of Columbia	—	0	0	—	NN	—	0	0	—	NN
Florida	—	0	5	41	NN	—	0	1	1	NN
Georgia	—	0	2	4	NN	—	0	0	—	NN
Maryland¶	—	0	0	—	NN	—	0	0	—	NN
North Carolina	—	0	0	—	NN	—	0	0	—	NN
South Carolina¶	—	0	1	2	NN	—	0	0	—	NN
Virginia¶	—	0	0	—	NN	—	0	0	—	NN
West Virginia	—	0	0	—	NN	—	0	0	—	NN
E.S. Central	—	0	1	1	NN	—	0	0	—	NN
Alabama¶	—	0	0	—	NN	—	0	0	—	NN
Kentucky	—	0	0	—	NN	—	0	0	—	NN
Mississippi	—	0	0	—	NN	—	0	0	—	NN
Tennessee¶	—	0	1	1	NN	—	0	0	—	NN
W.S. Central	—	0	0	—	NN	—	0	0	—	NN
Arkansas¶	—	0	0	—	NN	—	0	0	—	NN
Louisiana	—	0	0	—	NN	—	0	0	—	NN
Oklahoma	—	0	0	—	NN	—	0	0	—	NN
Texas¶	—	0	0	—	NN	—	0	0	—	NN
Mountain	—	0	1	2	NN	—	0	0	—	NN
Arizona	—	0	0	—	NN	—	0	0	—	NN
Colorado	—	0	0	—	NN	—	0	0	—	NN
Idaho¶	—	0	0	—	NN	—	0	0	—	NN
Montana¶	—	0	0	—	NN	—	0	0	—	NN
Nevada¶	—	0	1	1	NN	—	0	0	—	NN
New Mexico¶	—	0	1	1	NN	—	0	0	—	NN
Utah	—	0	0	—	NN	—	0	0	—	NN
Wyoming¶	—	0	0	—	NN	—	0	0	—	NN
Pacific	—	0	2	7	NN	—	0	0	—	NN
Alaska	—	0	0	—	NN	—	0	0	—	NN
California	—	0	1	4	NN	—	0	0	—	NN
Hawaii	—	0	0	—	NN	—	0	0	—	NN
Oregon	—	0	0	—	NN	—	0	0	—	NN
Washington	—	0	2	3	NN	—	0	0	—	NN
American Samoa	—	0	0	—	NN	—	0	0	—	NN
C.N.M.I.	—	—	—	—	NN	—	—	—	—	NN
Guam	—	0	0	—	NN	—	0	0	—	NN
Puerto Rico	—	1	83	1,004	NN	—	0	3	24	NN
U.S. Virgin Islands	—	0	0	—	NN	—	0	0	—	NN

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Dengue Fever includes cases that meet criteria for Dengue Fever with hemorrhage.
§ DHF includes cases that meet criteria for dengue shock syndrome (DSS), a more severe form of DHF.
¶ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	Ehrlichiosis/Anaplasmosis†														
	Ehrlichia chaffeensis					*Anaplasma phagocytophilum*					Undetermined				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	9	12	181	202	422	8	14	309	191	457	—	2	35	30	95
New England	—	0	6	3	23	—	2	22	24	130	—	0	1	2	2
Connecticut	—	0	0	—	—	—	0	13	—	1	—	0	0	—	—
Maine§	—	0	1	2	3	—	0	2	7	10	—	0	0	—	—
Massachusetts	—	0	2	—	5	—	0	7	—	73	—	0	0	—	—
New Hampshire	—	0	1	1	3	—	0	3	7	14	—	0	1	2	1
Rhode Island§	—	0	4	—	12	—	0	20	10	32	—	0	0	—	1
Vermont§	—	0	1	—	—	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	1	1	15	17	81	8	3	27	68	133	—	0	4	1	27
New Jersey	—	0	6	—	51	—	0	6	1	51	—	0	0	—	—
New York (Upstate)	1	1	15	12	18	8	2	20	67	77	—	0	2	1	3
New York City	—	0	1	4	5	—	0	1	—	4	—	0	0	—	1
Pennsylvania	—	0	5	1	7	—	0	1	—	1	—	0	3	—	23
E.N. Central	—	0	7	10	60	—	3	21	69	180	—	1	6	13	45
Illinois	—	0	3	5	27	—	0	1	—	4	—	0	1	1	3
Indiana	—	0	0	—	—	—	0	0	—	—	—	0	3	8	25
Michigan	—	0	1	—	2	—	0	0	—	—	—	0	1	1	—
Ohio	—	0	2	—	6	—	0	0	—	1	—	0	1	—	1
Wisconsin	—	0	3	5	25	—	3	20	69	175	—	0	3	3	16
W.N. Central	1	2	23	55	73	—	0	261	5	1	—	0	30	9	9
Iowa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Kansas	—	0	1	4	6	—	0	1	—	—	—	0	0	—	—
Minnesota	—	0	6	—	—	—	0	261	—	—	—	0	30	—	2
Missouri	1	1	22	50	67	—	0	3	5	1	—	0	4	9	7
Nebraska§	—	0	1	1	—	—	0	1	—	—	—	0	0	—	—
North Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
South Dakota	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
S. Atlantic	1	3	22	67	110	—	0	4	19	10	—	0	2	—	—
Delaware	—	0	3	11	9	—	0	1	3	2	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Florida	1	0	2	7	7	—	0	1	1	1	—	0	0	—	—
Georgia	—	0	2	8	13	—	0	1	1	1	—	0	0	—	—
Maryland§	—	0	3	9	25	—	0	2	8	2	—	0	0	—	—
North Carolina	—	0	9	7	25	—	0	1	1	2	—	0	0	—	—
South Carolina§	—	0	2	2	6	—	0	0	—	—	—	0	0	—	—
Virginia§	—	1	13	23	24	—	0	2	5	2	—	0	2	—	—
West Virginia	—	0	0	—	1	—	0	0	—	—	—	0	1	—	—
E.S. Central	3	1	11	38	55	—	0	2	6	2	—	0	5	5	12
Alabama§	—	0	3	5	1	—	0	1	2	—	—	0	0	—	—
Kentucky	1	0	2	6	6	—	0	0	—	—	—	0	0	—	—
Mississippi	—	0	1	1	5	—	0	1	1	—	—	0	0	—	—
Tennessee§	2	1	10	26	43	—	0	1	3	2	—	0	5	5	12
W.S. Central	3	0	141	11	18	—	0	23	—	1	—	0	1	—	—
Arkansas§	—	0	34	—	2	—	0	6	—	—	—	0	0	—	—
Louisiana	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oklahoma	3	0	105	10	15	—	0	16	—	1	—	0	0	—	—
Texas§	—	0	2	1	1	—	0	1	—	—	—	0	1	—	—
Mountain	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Arizona	—	0	0	—	—	—	0	0	—	—	—	0	1	—	—
Colorado	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Montana§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Nevada§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
New Mexico§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Utah	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Wyoming§	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Pacific	—	0	1	1	2	—	0	1	—	—	—	0	1	—	—
Alaska	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
California	—	0	1	1	2	—	0	1	—	—	—	0	1	—	—
Hawaii	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Cumulative total *E. ewingii* cases reported for year 2010 = 3.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	Giardiasis					Gonorrhea					*Haemophilus influenzae*, invasive† All ages, all serotypes				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	222	344	666	8,524	8,903	2,830	5,080	6,656	130,852	162,569	23	56	171	1,612	1,710
New England	12	31	65	712	733	69	91	197	2,554	2,603	1	3	21	96	108
Connecticut	—	5	15	112	144	—	44	170	1,044	1,211	—	0	15	20	28
Maine§	2	4	13	98	95	4	3	11	104	76	—	0	2	6	13
Massachusetts	7	13	36	311	311	64	40	72	1,164	1,049	1	2	8	52	54
New Hampshire	—	3	11	69	82	1	2	7	78	59	—	0	2	7	6
Rhode Island§	—	1	7	34	32	—	5	13	134	185	—	0	2	7	3
Vermont§	3	4	14	88	69	—	1	17	30	23	—	0	1	4	4
Mid. Atlantic	28	60	112	1,412	1,656	572	647	941	17,647	16,235	2	11	34	326	318
New Jersey	—	7	15	127	223	63	97	135	2,578	2,500	—	2	7	41	76
New York (Upstate)	16	24	84	536	609	123	104	422	2,804	2,711	—	4	20	90	73
New York City	—	16	26	389	437	244	216	394	6,326	5,833	—	2	6	63	35
Pennsylvania	12	15	37	360	387	142	209	277	5,939	5,191	2	4	9	132	134
E.N. Central	22	51	92	1,291	1,384	156	1,047	1,536	24,158	34,647	3	9	20	271	280
Illinois	—	11	22	262	299	12	218	441	4,452	11,119	—	2	9	74	105
Indiana	—	6	14	121	132	—	97	183	2,564	4,123	—	1	6	48	49
Michigan	4	13	25	317	326	107	247	502	7,210	8,178	—	0	4	19	15
Ohio	18	16	28	430	406	37	318	372	7,684	8,370	3	2	6	70	65
Wisconsin	—	7	23	161	221	—	90	190	2,248	2,857	—	2	5	60	46
W.N. Central	22	26	165	734	805	112	268	367	6,926	8,135	4	3	24	97	91
Iowa	4	5	13	139	148	2	31	54	826	928	—	0	1	1	—
Kansas	3	4	14	111	68	—	39	83	972	1,380	—	0	2	8	11
Minnesota	—	0	135	136	214	—	41	64	1,006	1,271	—	0	17	24	21
Missouri	7	9	27	189	240	87	123	172	3,428	3,584	2	1	6	45	38
Nebraska§	8	3	9	107	89	23	23	54	622	710	2	0	2	11	16
North Dakota	—	0	8	12	7	—	2	11	72	66	—	0	4	8	5
South Dakota	—	1	10	40	39	—	0	16	—	196	—	0	0	—	—
S. Atlantic	63	74	143	1,975	1,861	716	1,038	1,656	26,319	40,867	7	13	27	389	466
Delaware	—	0	3	14	16	19	18	37	516	473	—	0	1	5	3
District of Columbia	—	1	4	17	38	—	43	86	1,019	1,498	—	0	1	1	2
Florida	38	37	87	1,020	977	188	381	482	10,319	11,620	6	3	9	112	153
Georgia	15	14	52	459	390	—	124	494	2,027	7,563	1	3	9	102	91
Maryland§	3	5	12	151	144	129	128	237	3,466	3,237	—	1	6	34	55
North Carolina	N	0	0	N	N	—	116	325	—	7,954	—	1	6	20	55
South Carolina§	—	2	7	58	47	247	158	214	4,420	4,547	—	2	7	54	38
Virginia§	7	8	36	240	225	120	164	271	4,307	3,679	—	2	4	50	50
West Virginia	—	1	5	16	24	13	8	19	245	296	—	0	5	11	19
E.S. Central	3	7	22	129	193	455	482	706	12,571	14,426	—	3	12	103	113
Alabama§	—	4	13	77	91	178	140	187	3,895	4,148	—	0	3	15	28
Kentucky	N	0	0	N	N	76	86	156	2,181	1,839	—	0	2	18	15
Mississippi	N	0	0	N	N	101	121	219	2,779	4,062	—	0	2	9	7
Tennessee§	3	3	18	52	102	100	147	206	3,716	4,377	—	2	10	61	63
W.S. Central	9	9	18	181	230	197	804	1,229	20,360	25,662	2	2	20	80	80
Arkansas§	5	2	9	57	68	125	72	139	1,405	2,371	—	0	3	12	15
Louisiana	—	3	10	67	97	—	94	343	910	5,215	—	0	3	15	13
Oklahoma	4	3	10	57	65	69	81	359	2,291	2,233	2	1	15	47	49
Texas§	N	0	0	N	N	3	568	964	15,754	15,843	—	0	2	6	3
Mountain	31	31	64	756	739	47	174	266	4,463	4,797	4	5	14	184	155
Arizona	2	3	7	75	96	9	62	109	1,429	1,579	—	2	10	69	51
Colorado	27	12	26	370	204	15	50	127	1,352	1,453	3	1	5	54	46
Idaho§	—	4	10	101	82	—	2	8	40	52	1	0	2	10	2
Montana§	—	3	11	55	60	1	2	6	61	43	—	0	1	2	1
Nevada§	2	1	11	30	54	22	27	94	941	922	—	0	2	5	11
New Mexico§	—	1	8	40	66	—	19	41	455	553	—	1	5	24	20
Utah	—	4	13	66	144	—	7	15	168	158	—	0	4	15	22
Wyoming§	—	1	5	19	33	—	1	7	17	37	—	0	2	5	2
Pacific	32	54	133	1,334	1,302	506	560	665	15,854	15,197	—	2	9	66	99
Alaska	—	2	7	43	41	—	23	36	673	470	—	0	2	12	10
California	23	34	61	855	902	463	462	561	13,489	12,510	—	0	4	12	34
Hawaii	—	0	3	6	12	—	10	24	318	349	—	0	2	—	23
Oregon	2	9	17	242	180	—	10	43	106	605	—	1	5	39	29
Washington	7	8	75	188	167	43	43	84	1,268	1,263	—	0	4	3	3
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	1	1	3	—	0	3	14	12	—	0	0	—	—
Puerto Rico	—	1	10	11	86	—	4	14	129	148	—	0	1	1	2
U.S. Virgin Islands	—	0	0	—	—	—	1	4	25	86	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Data for *H. influenzae* (age <5 yrs for serotype b, nonserotype b, and unknown serotype) are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	Hepatitis (viral, acute), by type														
	A					B					C				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	11	31	69	734	1,065	30	58	204	1,474	1,801	4	14	44	396	416
New England	—	2	5	56	56	—	1	5	30	32	—	1	5	18	32
Connecticut	—	0	2	14	12	—	0	2	7	8	—	1	4	13	24
Maine†	—	0	1	4	1	—	0	2	9	7	—	0	1	—	—
Massachusetts	—	1	4	33	33	—	0	2	7	14	—	0	1	5	7
New Hampshire	—	0	1	—	5	—	0	2	5	3	—	0	0	—	—
Rhode Island†	—	0	4	5	3	—	0	0	—	U	—	0	0	—	U
Vermont†	—	0	0	—	2	—	0	1	2	—	—	0	0	—	1
Mid. Atlantic	4	4	10	98	147	2	5	10	144	207	—	2	5	55	53
New Jersey	—	0	4	10	41	—	1	4	32	63	—	0	2	5	3
New York (Upstate)	2	1	3	29	25	—	1	6	27	35	—	1	3	32	27
New York City	—	1	5	30	44	—	1	4	44	39	—	0	1	—	2
Pennsylvania	2	1	6	29	37	2	1	5	41	70	—	0	3	18	21
E.N. Central	—	4	10	90	173	3	8	15	232	260	—	2	6	80	61
Illinois	—	1	6	17	77	—	2	6	49	60	—	0	1	1	3
Indiana	—	0	2	8	13	—	1	5	29	44	—	0	2	14	13
Michigan	—	1	4	28	40	2	2	6	62	83	—	1	6	58	20
Ohio	—	0	4	17	26	1	2	6	62	59	—	0	3	5	22
Wisconsin	—	0	3	20	17	—	1	3	30	14	—	0	1	2	3
W.N. Central	1	1	10	25	66	2	3	15	71	67	1	0	11	13	6
Iowa	—	0	3	4	21	—	0	3	10	18	—	0	4	1	3
Kansas	1	0	2	8	6	—	0	2	4	4	—	0	0	—	1
Minnesota	—	0	8	1	12	—	0	13	2	10	—	0	9	3	—
Missouri	—	0	3	11	11	2	1	5	45	24	—	0	1	7	—
Nebraska†	—	0	3	1	14	—	0	2	9	10	1	0	1	2	2
North Dakota	—	0	1	—	—	—	0	0	—	—	—	0	1	—	—
South Dakota	—	0	1	—	2	—	0	1	1	1	—	0	1	—	—
S. Atlantic	3	7	13	162	228	7	16	40	409	497	1	3	7	71	95
Delaware	—	0	1	5	3	—	1	2	16	18	U	0	0	U	U
District of Columbia	—	0	1	1	1	—	0	2	2	7	—	0	1	2	—
Florida	1	3	8	65	104	4	5	11	160	168	1	1	4	26	20
Georgia	1	1	3	19	27	1	3	7	82	75	—	0	2	6	25
Maryland†	—	0	4	12	25	2	1	6	31	46	—	0	2	13	13
North Carolina	—	0	4	11	25	—	1	4	4	66	—	0	4	9	13
South Carolina†	—	1	4	22	27	—	1	4	27	25	—	0	0	—	1
Virginia†	1	1	6	26	16	—	2	14	55	48	—	0	2	9	7
West Virginia	—	0	2	1	—	—	0	19	32	44	—	0	3	6	16
E.S. Central	—	1	3	20	25	5	7	13	165	183	1	2	7	70	56
Alabama†	—	0	1	5	6	—	1	5	32	53	—	0	2	2	5
Kentucky	—	0	2	9	4	2	2	6	55	44	—	1	5	48	35
Mississippi	—	0	1	—	7	—	0	3	16	16	—	0	0	—	U
Tennessee†	—	0	2	6	8	3	2	6	62	70	1	0	4	20	16
W.S. Central	1	3	19	76	104	6	9	109	215	296	—	1	14	30	31
Arkansas†	—	0	3	—	5	—	1	4	27	39	—	0	1	—	1
Louisiana	—	0	2	6	2	—	1	5	21	33	—	0	1	3	5
Oklahoma	—	0	3	—	1	3	1	19	39	50	—	0	12	14	4
Texas†	1	2	18	70	96	3	5	87	128	174	—	0	3	13	21
Mountain	1	3	8	83	80	1	2	6	56	81	—	1	4	21	32
Arizona	—	1	5	43	33	—	0	2	20	33	—	0	0	—	U
Colorado	1	1	4	14	25	1	0	2	3	15	—	0	2	2	20
Idaho†	—	0	2	5	2	—	0	1	4	5	—	0	2	7	2
Montana†	—	0	1	4	4	—	0	1	1	—	—	0	0	—	1
Nevada†	—	0	2	7	7	—	1	3	22	15	—	0	1	2	2
New Mexico†	—	0	1	3	6	—	0	1	2	5	—	0	2	6	5
Utah	—	0	2	4	3	—	0	1	4	4	—	0	1	4	2
Wyoming†	—	0	3	3	—	—	0	0	—	4	—	0	0	—	—
Pacific	1	5	16	124	186	4	6	20	152	178	1	1	6	38	50
Alaska	—	0	1	1	2	—	0	1	1	2	—	0	2	—	U
California	1	4	15	98	141	3	4	16	103	127	1	0	4	19	25
Hawaii	—	0	2	1	7	—	0	1	—	4	—	0	0	—	U
Oregon	—	0	2	12	10	—	1	4	26	24	—	0	3	8	13
Washington	—	0	2	12	26	1	1	4	22	21	—	0	6	11	12
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	6	12	4	—	0	6	23	40	—	0	6	22	30
Puerto Rico	1	0	2	3	18	—	0	5	8	20	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	Legionellosis					Lyme disease					Malaria				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	35	60	174	1,249	1,396	455	420	2,346	9,513	18,479	11	25	89	561	657
New England	2	3	18	52	87	33	110	836	2,319	6,947	1	1	4	33	28
Connecticut	—	1	4	14	25	—	36	295	728	2,506	—	0	1	1	4
Maine†	—	0	3	4	2	12	14	76	230	221	1	0	1	5	1
Massachusetts	—	1	7	22	49	1	38	383	683	3,140	—	1	3	21	17
New Hampshire	—	0	3	3	5	6	22	61	529	824	—	0	1	1	2
Rhode Island†	—	0	4	5	4	—	1	29	23	87	—	0	1	4	2
Vermont†	2	0	1	4	2	14	4	45	126	169	—	0	1	1	2
Mid. Atlantic	9	16	73	309	489	309	193	999	4,821	7,482	1	7	17	156	188
New Jersey	—	2	14	33	94	—	44	286	1,134	3,064	—	0	5	1	53
New York (Upstate)	4	5	29	102	123	204	56	577	1,219	1,415	1	1	4	35	26
New York City	—	2	14	51	109	—	1	58	3	496	—	4	12	90	78
Pennsylvania	5	6	20	123	163	105	73	475	2,465	2,507	—	1	3	30	31
E.N. Central	5	11	41	245	245	4	23	226	617	1,653	1	2	12	56	84
Illinois	—	1	11	18	33	—	1	12	22	82	—	1	7	20	40
Indiana	2	1	6	45	26	—	1	6	28	42	—	0	4	7	9
Michigan	1	2	13	43	50	2	1	9	35	28	—	0	3	7	13
Ohio	2	5	17	115	104	2	1	5	13	16	1	0	6	21	17
Wisconsin	—	1	6	24	32	—	18	199	519	1,485	—	0	2	1	5
W.N. Central	1	2	19	59	54	2	3	1,395	41	117	1	1	11	27	31
Iowa	—	0	3	4	13	—	0	6	24	74	—	0	1	6	5
Kansas	—	0	2	5	4	—	0	2	5	14	—	0	1	3	3
Minnesota	1	0	16	18	5	—	0	1,380	—	26	—	0	11	3	13
Missouri	—	1	5	21	24	—	0	1	3	1	1	0	1	5	6
Nebraska†	—	0	2	4	7	2	0	1	6	1	—	0	2	8	3
North Dakota	—	0	1	3	1	—	0	15	2	—	—	0	1	—	—
South Dakota	—	0	1	4	—	—	0	1	1	1	—	0	2	2	1
S. Atlantic	10	10	24	245	256	101	62	259	1,523	2,090	1	6	15	142	188
Delaware	—	0	3	10	8	10	12	65	344	514	—	0	1	2	2
District of Columbia	—	0	4	12	13	—	0	4	10	38	—	0	3	7	7
Florida	5	4	10	92	79	7	2	11	39	20	—	2	7	59	46
Georgia	—	1	4	24	27	—	0	2	4	30	—	0	6	3	43
Maryland†	2	3	12	55	65	44	27	134	664	1,038	—	1	13	30	45
North Carolina	—	0	4	2	29	—	0	5	12	52	—	0	3	5	18
South Carolina†	—	0	2	5	4	—	1	3	18	18	—	0	1	3	1
Virginia†	2	1	6	37	29	40	14	79	416	329	1	1	5	33	25
West Virginia	1	0	3	8	2	—	0	33	16	51	—	0	2	—	1
E.S. Central	1	2	12	68	57	—	1	4	28	14	1	0	3	12	24
Alabama†	—	0	2	7	9	—	0	1	—	2	—	0	2	2	6
Kentucky	—	0	3	13	23	—	0	1	1	1	—	0	3	3	7
Mississippi	—	0	2	7	2	—	0	0	—	—	—	0	1	—	3
Tennessee†	1	1	9	41	23	—	1	4	27	11	1	0	1	7	8
W.S. Central	1	2	14	43	56	—	3	44	32	79	—	1	31	47	22
Arkansas†	—	0	2	8	4	—	0	0	—	—	—	0	1	1	3
Louisiana	—	0	3	2	5	—	0	0	—	—	—	0	1	—	4
Oklahoma	1	0	4	7	3	—	0	2	—	—	—	0	1	3	—
Texas†	—	1	10	26	44	—	3	42	32	79	—	1	30	43	15
Mountain	5	3	8	79	61	1	0	4	9	30	3	1	6	24	23
Arizona	1	1	4	26	23	—	0	1	3	2	3	0	2	14	3
Colorado	2	1	5	19	9	—	0	1	1	—	—	0	3	3	16
Idaho†	1	0	2	1	1	1	0	3	2	8	—	0	1	—	1
Montana†	—	0	1	4	4	—	0	1	—	1	—	0	3	1	1
Nevada†	1	0	2	16	8	—	0	1	—	9	—	0	1	3	—
New Mexico†	—	0	2	2	1	—	0	1	1	3	—	0	0	—	—
Utah	—	0	3	9	14	—	0	1	2	6	—	0	1	3	2
Wyoming†	—	0	2	2	1	—	0	1	—	1	—	0	0	—	—
Pacific	1	5	19	149	91	5	4	10	123	67	2	3	19	64	69
Alaska	—	0	0	—	1	—	0	1	1	4	—	0	1	2	2
California	1	3	19	129	69	4	3	9	82	37	2	1	13	39	52
Hawaii	—	0	1	1	1	N	0	0	N	N	—	0	0	—	1
Oregon	—	0	3	8	7	—	1	4	35	23	—	0	1	6	7
Washington	—	0	4	11	13	1	0	3	5	3	—	0	5	17	7
American Samoa	—	0	0	—	—	N	0	0	N	N	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	1	—	—	N	0	0	N	N	—	0	1	1	3
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	Meningococcal disease, invasive† All groups					Pertussis					Rabies, animal				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	6	16	43	434	578	139	281	1,756	6,917	7,869	41	63	147	1,463	2,779
New England	—	0	2	10	21	3	7	21	151	380	3	5	24	132	183
Connecticut	—	0	2	1	2	—	1	5	20	23	—	1	22	59	80
Maine§	—	0	1	3	3	1	0	3	14	66	1	1	4	30	29
Massachusetts	—	0	1	2	10	2	4	11	96	222	—	0	0	—	—
New Hampshire	—	0	1	—	1	—	0	3	6	48	—	0	2	3	21
Rhode Island§	—	0	1	—	4	—	0	8	12	13	—	1	5	12	21
Vermont§	—	0	1	4	1	—	0	1	3	8	2	1	5	28	32
Mid. Atlantic	—	1	4	38	66	30	21	41	489	627	15	11	26	367	314
New Jersey	—	0	2	9	11	—	3	10	47	133	—	0	0	—	—
New York (Upstate)	—	0	3	9	15	15	6	27	199	102	15	9	22	262	208
New York City	—	0	2	8	12	4	0	11	38	51	—	2	12	105	6
Pennsylvania	—	0	2	12	28	11	8	22	205	341	—	0	0	—	100
E.N. Central	—	2	8	70	105	36	62	116	1,700	1,599	7	2	19	99	94
Illinois	—	0	4	12	26	—	11	26	283	383	4	1	9	46	30
Indiana	—	0	3	16	23	—	8	20	211	184	—	0	5	—	19
Michigan	—	0	2	10	17	7	19	41	471	330	1	1	6	32	26
Ohio	—	0	2	18	25	29	19	46	642	601	2	0	5	21	19
Wisconsin	—	0	2	14	14	—	3	12	93	101	—	0	0	—	—
W.N. Central	—	2	6	34	43	7	25	627	514	1,194	8	5	18	134	216
Iowa	—	0	3	7	6	—	5	23	184	134	—	0	4	7	21
Kansas	—	0	2	4	7	—	3	9	74	138	3	1	4	37	51
Minnesota	—	0	2	2	9	—	0	601	6	205	1	1	9	17	29
Missouri	—	0	3	15	15	—	11	35	160	598	3	1	5	37	23
Nebraska§	—	0	2	5	4	7	2	9	66	92	1	1	6	30	55
North Dakota	—	0	1	1	—	—	0	12	6	15	—	0	7	6	4
South Dakota	—	0	2	—	2	—	1	6	18	12	—	0	4	—	33
S. Atlantic	3	3	6	81	106	12	23	63	569	857	2	25	58	542	1,234
Delaware	—	0	1	1	2	—	0	3	5	8	—	0	0	—	—
District of Columbia	—	0	0	—	—	—	0	1	3	3	—	0	0	—	—
Florida	3	1	5	42	35	5	6	28	147	273	—	0	31	61	161
Georgia	—	0	1	6	21	—	3	8	88	147	—	0	14	—	229
Maryland§	—	0	1	4	6	2	2	8	54	73	—	6	15	179	199
North Carolina	—	0	2	5	20	—	0	10	—	122	—	3	17	—	278
South Carolina§	—	0	1	7	8	2	5	23	189	127	—	0	0	—	—
Virginia§	—	0	2	14	10	1	4	15	72	96	—	10	26	261	301
West Virginia	—	0	2	2	4	2	0	6	11	8	2	2	6	41	66
E.S. Central	—	0	4	21	21	6	14	31	384	449	—	2	7	64	92
Alabama§	—	0	2	4	6	—	5	16	110	165	—	0	4	25	—
Kentucky	—	0	2	9	4	2	4	15	134	126	—	0	4	10	29
Mississippi	—	0	1	2	2	—	1	6	28	44	—	0	1	—	1
Tennessee§	—	0	2	6	9	4	4	10	112	114	—	1	6	29	62
W.S. Central	—	1	9	51	50	18	66	753	1,479	1,624	1	3	40	20	463
Arkansas§	—	0	2	5	5	1	4	29	57	180	—	0	10	13	28
Louisiana	—	0	3	8	10	—	1	7	16	99	—	0	0	—	—
Oklahoma	—	0	7	14	4	3	0	41	17	17	1	0	15	7	7
Texas§	—	1	7	24	31	14	57	681	1,389	1,328	—	0	30	—	428
Mountain	—	1	5	38	45	10	19	41	525	533	1	1	8	24	53
Arizona	—	0	2	9	9	—	7	14	196	109	—	0	5	—	—
Colorado	—	0	3	12	13	5	2	13	69	147	—	0	0	—	—
Idaho§	—	0	1	5	6	4	2	19	86	48	1	0	2	2	—
Montana§	—	0	1	1	5	—	1	8	31	13	—	0	4	2	15
Nevada§	—	0	1	7	4	1	0	7	17	7	—	0	1	2	2
New Mexico§	—	0	1	3	3	—	1	6	36	38	—	0	3	7	16
Utah	—	0	1	1	1	—	3	9	86	151	—	0	2	—	3
Wyoming§	—	0	1	—	4	—	0	1	4	20	—	0	3	11	17
Pacific	3	3	16	91	121	17	34	186	1,106	606	4	3	12	81	130
Alaska	—	0	2	1	3	—	0	6	15	29	—	0	2	11	9
California	1	2	13	58	78	—	22	162	807	273	4	3	11	63	116
Hawaii	—	0	2	—	3	—	0	4	—	20	—	0	0	—	—
Oregon	1	1	3	22	28	5	6	16	179	133	—	0	2	7	5
Washington	1	0	7	10	9	12	4	24	105	151	—	0	0	—	—
American Samoa	—	0	0	—	—	—	0	0	—	—	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	2	—	—	—	0	0	—	—
Puerto Rico	—	0	1	—	—	—	0	0	—	1	1	1	3	25	24
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Data for meningococcal disease, invasive caused by serogroups A, C, Y, and W-135; serogroup B; other serogroup; and unknown serogroup are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	Salmonellosis					Shiga toxin-producing *E. coli* (STEC)†					Shigellosis				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	696	832	1,555	17,808	21,637	75	73	198	1,646	2,100	160	261	527	6,768	8,741
New England	16	30	227	1,045	1,399	1	3	30	80	152	3	5	35	155	138
Connecticut	—	0	211	211	430	—	0	27	27	67	—	0	28	28	43
Maine§	1	2	7	54	64	—	0	2	4	10	—	0	2	3	2
Massachusetts	13	22	47	578	595	—	2	6	32	43	3	4	27	110	73
New Hampshire	—	3	9	85	186	—	0	2	11	19	—	0	5	4	9
Rhode Island§	—	2	16	88	81	—	0	26	—	—	—	0	7	9	8
Vermont§	2	1	4	29	43	1	0	2	6	13	—	0	1	1	3
Mid. Atlantic	91	89	208	2,236	2,503	10	7	24	194	200	15	35	90	868	1,651
New Jersey	—	15	47	302	510	—	1	5	17	60	—	6	23	157	356
New York (Upstate)	53	24	78	603	558	4	3	15	81	50	6	4	19	89	108
New York City	—	23	46	523	580	—	0	4	19	37	—	7	15	148	241
Pennsylvania	38	29	67	808	855	6	2	8	77	53	9	19	63	474	946
E.N. Central	45	81	159	2,168	2,750	2	10	29	235	385	10	27	235	978	1,673
Illinois	—	25	75	763	785	—	1	6	24	105	—	9	228	570	377
Indiana	—	9	22	148	315	—	1	9	27	47	—	1	5	20	44
Michigan	6	15	34	374	534	—	2	16	80	68	3	4	10	111	137
Ohio	39	24	47	695	760	2	2	11	62	61	7	7	46	178	787
Wisconsin	—	9	26	188	356	—	2	8	42	104	—	5	16	99	328
W.N. Central	44	44	94	1,090	1,418	8	11	42	292	335	48	48	88	1,543	487
Iowa	8	7	25	208	221	—	3	12	59	84	1	1	5	30	42
Kansas	12	6	20	186	198	1	1	5	34	36	6	3	14	150	141
Minnesota	—	8	32	178	305	—	1	17	31	77	—	0	6	14	39
Missouri	17	13	29	338	298	6	2	29	122	70	40	44	75	1,326	244
Nebraska§	6	4	12	102	229	1	1	6	35	47	1	0	3	19	15
North Dakota	1	0	39	16	27	—	0	7	—	4	—	0	5	—	3
South Dakota	—	2	9	62	140	—	0	12	11	17	—	0	2	4	3
S. Atlantic	239	244	502	4,554	5,413	16	12	26	274	336	32	40	70	987	1,329
Delaware	2	2	9	58	45	—	0	2	3	8	—	3	10	36	45
District of Columbia	—	2	6	37	50	—	0	1	4	1	—	0	4	16	16
Florida	177	126	277	2,247	2,302	10	3	8	105	86	23	11	30	420	237
Georgia	18	40	105	758	983	—	1	4	32	40	3	12	24	343	360
Maryland§	30	15	32	389	378	2	1	6	40	41	4	3	17	58	232
North Carolina	—	22	90	230	730	—	1	5	4	67	—	1	18	15	257
South Carolina§	1	19	66	350	346	—	0	3	12	17	—	1	5	34	74
Virginia§	11	18	68	403	470	3	2	15	67	65	2	3	15	64	103
West Virginia	—	3	17	82	109	1	0	5	7	11	—	0	2	1	5
E.S. Central	31	49	118	1,091	1,303	4	4	10	103	119	2	11	40	367	523
Alabama§	—	14	40	275	369	—	1	4	24	28	—	2	10	57	101
Kentucky	13	8	29	238	232	2	1	4	18	41	1	4	28	167	130
Mississippi	—	12	42	245	352	—	0	2	10	6	—	1	4	19	21
Tennessee§	18	14	33	333	350	2	2	8	51	44	1	5	11	124	271
W.S. Central	69	93	547	1,699	2,273	3	4	68	80	144	30	48	251	1,120	1,694
Arkansas§	34	10	26	244	270	2	1	5	25	18	—	2	11	26	196
Louisiana	5	18	46	392	481	—	0	3	6	14	—	3	9	113	119
Oklahoma	24	10	46	228	273	1	0	27	8	11	3	7	96	155	126
Texas§	6	48	477	835	1,249	—	3	41	41	101	27	33	144	826	1,253
Mountain	31	50	133	1,190	1,504	13	7	26	175	252	11	14	39	318	652
Arizona	4	18	50	382	491	1	1	5	34	33	5	8	32	167	467
Colorado	16	11	33	298	325	5	2	11	39	90	6	2	6	56	48
Idaho§	3	3	10	75	92	6	1	7	29	34	—	0	3	9	4
Montana§	—	2	7	51	70	1	1	7	25	14	—	0	1	4	11
Nevada§	8	4	14	122	133	—	0	4	11	17	—	1	7	17	34
New Mexico§	—	5	40	117	169	—	1	3	15	20	—	1	6	55	74
Utah	—	5	15	125	173	—	1	11	17	41	—	0	4	10	13
Wyoming§	—	1	9	20	51	—	0	2	5	3	—	0	2	—	1
Pacific	130	116	299	2,735	3,074	18	9	46	213	177	9	21	64	432	594
Alaska	—	1	5	44	40	—	0	1	1	1	—	0	2	—	1
California	102	84	227	2,024	2,346	4	5	35	98	105	6	16	51	363	468
Hawaii	—	4	62	32	139	—	0	4	6	3	—	0	4	4	18
Oregon	5	8	49	303	224	—	1	11	31	16	1	1	4	30	28
Washington	23	15	61	332	325	14	3	19	77	52	2	2	9	35	79
American Samoa	—	1	1	2	—	—	0	0	—	—	—	0	1	1	3
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	2	2	6	—	0	0	—	—	—	0	3	1	4
Puerto Rico	—	7	39	104	270	—	0	0	—	—	—	0	1	—	8
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

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† Includes *E. coli* O157:H7; Shiga toxin-positive, serogroup non-O157; and Shiga toxin-positive, not serogrouped.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	Spotted Fever Rickettsiosis (including RMSF)†									
	Confirmed					Probable				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max		
United States	—	2	8	50	82	19	12	421	433	763
New England	—	0	1	—	1	—	0	1	1	8
Connecticut	—	0	0	—	—	—	0	0	—	—
Maine§	—	0	0	—	—	—	0	1	1	4
Massachusetts	—	0	0	—	1	—	0	1	—	4
New Hampshire	—	0	0	—	—	—	0	1	—	—
Rhode Island§	—	0	0	—	—	—	0	0	—	—
Vermont§	—	0	1	—	—	—	0	0	—	—
Mid. Atlantic	—	0	3	11	4	1	1	6	20	57
New Jersey	—	0	1	—	1	—	0	3	—	39
New York (Upstate)	—	0	1	1	—	1	0	3	4	4
New York City	—	0	1	2	—	—	0	2	9	5
Pennsylvania	—	0	2	8	3	—	0	1	7	9
E.N. Central	—	0	1	1	6	—	0	5	26	55
Illinois	—	0	1	1	—	—	0	5	12	36
Indiana	—	0	0	—	3	—	0	2	9	6
Michigan	—	0	1	—	2	—	0	2	3	1
Ohio	—	0	0	—	—	—	0	4	2	10
Wisconsin	—	0	0	—	1	—	0	1	—	2
W.N. Central	—	0	3	7	10	2	2	23	123	143
Iowa	—	0	1	—	1	—	0	1	—	2
Kansas	—	0	1	2	1	—	0	0	—	—
Minnesota	—	0	1	—	—	—	0	1	—	—
Missouri	—	0	1	4	4	1	2	22	121	139
Nebraska§	—	0	2	1	4	—	0	1	1	2
North Dakota	—	0	0	—	—	1	0	0	1	—
South Dakota	—	0	0	—	—	—	0	0	—	—
S. Atlantic	—	0	3	16	45	3	3	30	98	240
Delaware	—	0	1	1	—	—	0	3	7	7
District of Columbia	—	0	0	—	—	—	0	1	—	—
Florida	—	0	1	1	—	1	0	1	8	2
Georgia	—	0	3	12	37	—	0	0	—	—
Maryland§	—	0	1	1	2	—	0	3	11	31
North Carolina	—	0	1	1	4	—	1	22	27	153
South Carolina§	—	0	1	—	2	—	0	1	5	14
Virginia§	—	0	1	—	—	2	0	6	40	33
West Virginia	—	0	0	—	—	—	0	1	—	—
E.S. Central	—	0	2	8	3	9	3	22	144	151
Alabama§	—	0	1	1	1	—	1	8	26	30
Kentucky	—	0	2	5	1	—	0	0	—	—
Mississippi	—	0	0	—	—	—	0	1	1	9
Tennessee§	—	0	2	2	1	9	3	15	117	112
W.S. Central	—	0	3	1	4	4	1	408	17	93
Arkansas§	—	0	1	—	—	—	0	110	—	43
Louisiana	—	0	0	—	—	—	0	0	—	2
Oklahoma	—	0	2	—	3	4	0	287	13	35
Texas§	—	0	1	1	1	—	0	11	4	13
Mountain	—	0	2	2	8	—	0	3	4	16
Arizona	—	0	2	—	3	—	0	2	1	6
Colorado	—	0	1	—	—	—	0	0	—	—
Idaho§	—	0	0	—	—	—	0	1	1	—
Montana§	—	0	1	2	4	—	0	1	1	6
Nevada§	—	0	0	—	—	—	0	0	—	1
New Mexico§	—	0	0	—	—	—	0	1	1	1
Utah	—	0	0	—	—	—	0	0	—	1
Wyoming§	—	0	0	—	1	—	0	1	—	1
Pacific	—	0	2	4	1	—	0	0	—	—
Alaska	N	0	0	N	N	N	0	0	N	N
California	—	0	2	4	1	—	0	0	—	—
Hawaii	N	0	0	N	N	N	0	0	N	N
Oregon	—	0	0	—	—	—	0	0	—	—
Washington	—	0	0	—	—	—	0	0	—	—
American Samoa	N	0	0	N	N	N	0	0	N	N
C.N.M.I.	—	—	—	—	—	—	—	—	—	—
Guam	N	0	0	N	N	N	0	0	N	N
Puerto Rico	N	0	0	N	N	N	0	0	N	N
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—

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* Incidence data for reporting years 2009 and 2010 are provisional.
† Illnesses with similar clinical presentation that result from Spotted fever group rickettsia infections are reported as Spotted fever rickettsioses. Rocky Mountain spotted fever (RMSF) caused by *Rickettsia rickettsii*, is the most common and well-known spotted fever.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	*Streptococcus pneumoniae*,† invasive disease										Syphilis, primary and secondary				
	All ages					Age <5									
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	79	163	484	9,032	1,926	9	49	156	1,415	1,432	87	237	413	5,778	7,459
New England	4	6	100	501	32	—	1	24	66	46	1	8	22	228	176
Connecticut	—	0	93	241	—	—	0	22	22	—	—	1	10	39	35
Maine§	—	1	6	75	8	—	0	2	6	2	—	0	3	14	1
Massachusetts	1	0	5	52	2	—	1	4	32	35	1	5	12	144	121
New Hampshire	—	0	7	59	—	—	0	2	3	6	—	0	1	11	10
Rhode Island§	3	0	5	19	13	—	0	1	—	1	—	0	5	18	9
Vermont§	—	1	6	55	9	—	0	1	3	2	—	0	2	2	—
Mid. Atlantic	4	12	53	767	115	2	7	48	225	180	35	33	47	890	960
New Jersey	—	0	8	68	—	—	1	4	37	28	3	4	12	121	133
New York (Upstate)	2	3	12	108	46	2	3	19	79	81	7	2	11	65	63
New York City	—	3	25	276	4	—	1	24	72	59	24	18	39	506	584
Pennsylvania	2	5	22	315	65	—	0	5	37	12	1	7	15	198	180
E.N. Central	15	23	96	1,812	449	2	8	18	220	241	—	26	44	566	802
Illinois	—	0	7	60	—	—	2	5	54	40	—	12	21	152	396
Indiana	—	5	23	363	176	—	1	6	29	48	—	3	13	77	81
Michigan	3	4	26	425	19	1	1	6	50	46	—	4	13	117	126
Ohio	12	13	49	771	254	1	2	6	60	82	—	8	13	198	172
Wisconsin	—	1	22	193	—	—	1	4	27	25	—	1	3	22	27
W.N. Central	3	8	182	561	123	—	3	12	102	110	3	5	12	139	165
Iowa	—	0	0	—	—	—	0	0	—	—	1	0	2	5	13
Kansas	—	1	7	63	44	—	0	2	11	14	—	0	3	10	14
Minnesota	—	0	179	287	26	—	1	10	44	42	—	1	5	46	40
Missouri	—	2	9	76	44	—	0	3	28	36	2	3	8	73	91
Nebraska§	—	1	7	87	—	—	0	2	10	7	—	0	1	5	4
North Dakota	3	0	11	34	7	—	0	1	2	4	—	0	1	—	3
South Dakota	—	0	3	14	2	—	0	2	7	7	—	0	0	—	—
S. Atlantic	27	39	143	2,095	860	2	12	28	356	345	23	57	218	1,420	1,767
Delaware	1	0	3	23	13	—	0	2	—	—	—	0	2	3	22
District of Columbia	—	0	4	21	16	—	0	2	7	3	—	2	8	73	99
Florida	14	18	89	981	510	2	3	18	132	127	—	19	31	478	599
Georgia	—	10	28	331	240	—	4	12	94	79	—	14	167	278	378
Maryland§	9	4	25	300	4	—	1	6	34	56	9	6	12	154	145
North Carolina	—	0	0	—	—	—	0	0	—	—	4	9	31	208	287
South Carolina§	—	2	25	325	—	—	1	4	35	32	5	2	6	73	66
Virginia§	—	0	4	41	—	—	1	4	39	30	5	4	22	150	167
West Virginia	3	1	21	73	77	—	0	4	15	18	—	0	2	3	4
E.S. Central	8	13	50	808	191	1	2	8	78	86	13	20	39	469	618
Alabama§	—	0	0	—	—	—	0	0	—	—	1	5	12	126	258
Kentucky	1	2	16	124	53	—	0	2	10	7	4	2	13	72	29
Mississippi	—	1	6	38	31	—	0	2	8	15	7	5	17	105	100
Tennessee§	7	8	44	646	107	1	2	7	60	64	1	6	16	166	231
W.S. Central	9	13	89	1,137	79	1	6	41	182	210	1	41	72	805	1,518
Arkansas§	1	2	9	110	38	—	0	3	10	29	1	4	14	81	106
Louisiana	—	1	8	47	41	—	0	3	16	17	—	6	27	64	449
Oklahoma	—	0	5	32	—	—	1	5	32	33	—	1	6	39	48
Texas§	8	10	82	948	—	1	3	34	124	131	—	27	46	621	915
Mountain	7	13	83	1,160	75	1	5	12	161	195	2	9	20	232	288
Arizona	2	5	52	552	—	1	2	7	75	87	—	4	10	92	137
Colorado	5	2	20	332	—	—	1	4	42	28	—	2	5	61	50
Idaho§	—	0	1	8	—	—	0	1	4	7	—	0	1	2	3
Montana§	—	0	2	13	—	—	0	1	1	—	—	0	1	1	—
Nevada§	—	1	4	49	28	—	0	1	4	6	2	1	10	54	56
New Mexico§	—	1	8	104	—	—	0	4	13	23	—	1	4	17	25
Utah	—	2	9	94	38	—	1	4	20	43	—	0	2	5	15
Wyoming§	—	0	1	8	9	—	0	1	2	1	—	0	1	—	2
Pacific	2	2	14	191	2	—	0	7	25	19	9	39	63	1,029	1,165
Alaska	—	0	9	71	—	—	0	5	16	11	—	0	0	—	—
California	2	1	12	120	—	—	0	2	9	—	7	35	58	930	1,038
Hawaii	—	0	1	—	2	—	0	1	—	8	—	0	3	18	20
Oregon	—	0	0	—	—	—	0	0	—	—	—	0	5	6	32
Washington	—	0	0	—	—	—	0	0	—	—	2	3	7	75	75
American Samoa	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—
Puerto Rico	—	0	0	—	—	—	0	0	—	—	—	3	17	114	114
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional.
† Includes drug resistant and susceptible cases of invasive *Streptococcus pneumoniae* disease among children <5 years and among all ages. Case definition: Isolation of *S. pneumoniae* from a normally sterile body site (e.g., blood or cerebrospinal fluid).
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).

TABLE II. (*Continued*) Provisional cases of selected notifiable diseases, United States, weeks ending July 17, 2010, and July 18, 2009 (28th week)*

Reporting area	Varicella (chickenpox)§					West Nile virus disease†									
						Neuroinvasive					Nonneuroinvasive¶				
	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009	Current week	Previous 52 weeks		Cum 2010	Cum 2009
		Med	Max				Med	Max				Med	Max		
United States	70	330	548	8,708	14,081	—	0	46	10	53	—	0	49	16	44
New England	1	16	36	397	637	—	0	0	—	—	—	0	0	—	—
Connecticut	—	6	20	177	308	—	0	0	—	—	—	0	0	—	—
Maine§	—	4	15	118	109	—	0	0	—	—	—	0	0	—	—
Massachusetts	—	0	1	—	3	—	0	0	—	—	—	0	0	—	—
New Hampshire	1	2	8	74	128	—	0	0	—	—	—	0	0	—	—
Rhode Island§	—	1	12	16	22	—	0	0	—	—	—	0	0	—	—
Vermont§	—	1	10	12	67	—	0	0	—	—	—	0	0	—	—
Mid. Atlantic	12	33	66	979	1,333	—	0	2	—	1	—	0	1	—	—
New Jersey	—	9	30	365	273	—	0	1	—	—	—	0	0	—	—
New York (Upstate)	N	0	0	N	N	—	0	1	—	1	—	0	1	—	—
New York City	—	0	0	—	—	—	0	1	—	—	—	0	0	—	—
Pennsylvania	12	21	52	614	1,060	—	0	0	—	—	—	0	0	—	—
E.N. Central	14	108	176	3,017	4,363	—	0	4	—	—	—	0	3	—	—
Illinois	1	26	49	754	1,020	—	0	3	—	—	—	0	0	—	—
Indiana§	4	5	35	284	322	—	0	1	—	—	—	0	1	—	—
Michigan	2	35	62	954	1,279	—	0	1	—	—	—	0	0	—	—
Ohio	7	28	56	839	1,355	—	0	0	—	—	—	0	2	—	—
Wisconsin	—	7	24	186	387	—	0	1	—	—	—	0	0	—	—
W.N. Central	2	13	40	343	906	—	0	5	—	2	—	0	11	3	16
Iowa	N	0	0	N	N	—	0	0	—	—	—	0	1	—	1
Kansas§	—	4	18	96	380	—	0	1	—	—	—	0	1	1	4
Minnesota	—	0	0	—	—	—	0	1	—	—	—	0	1	—	1
Missouri	2	6	16	204	436	—	0	2	—	1	—	0	1	—	—
Nebraska§	N	0	0	N	N	—	0	2	—	—	—	0	6	—	6
North Dakota	—	0	26	28	55	—	0	0	—	—	—	0	1	1	—
South Dakota	—	0	7	15	35	—	0	3	—	1	—	0	2	1	4
S. Atlantic	18	38	105	1,351	1,715	—	0	4	—	—	—	0	2	3	—
Delaware§	—	0	10	39	7	—	0	0	—	—	—	0	0	—	—
District of Columbia	—	0	4	14	22	—	0	1	—	—	—	0	0	—	—
Florida§	9	15	57	681	874	—	0	1	—	—	—	0	1	—	—
Georgia	N	0	0	N	N	—	0	1	—	—	—	0	1	3	—
Maryland§	N	0	0	N	N	—	0	0	—	—	—	0	1	—	—
North Carolina	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
South Carolina§	—	0	34	72	92	—	0	2	—	—	—	0	0	—	—
Virginia§	4	11	34	284	462	—	0	2	—	—	—	0	0	—	—
West Virginia	5	8	26	261	258	—	0	0	—	—	—	0	0	—	—
E.S. Central	—	6	28	181	356	—	0	6	1	7	—	0	4	1	2
Alabama§	—	6	27	174	353	—	0	0	—	—	—	0	1	1	—
Kentucky	N	0	0	N	N	—	0	1	—	1	—	0	0	—	—
Mississippi	—	0	2	7	3	—	0	5	1	4	—	0	4	—	2
Tennessee§	N	0	0	N	N	—	0	2	—	2	—	0	1	—	—
W.S. Central	20	62	285	1,758	3,421	—	0	19	—	19	—	0	6	—	1
Arkansas§	—	3	32	106	316	—	0	1	—	3	—	0	0	—	—
Louisiana	—	2	10	65	83	—	0	1	—	4	—	0	4	—	—
Oklahoma	N	0	0	N	N	—	0	2	—	1	—	0	2	—	—
Texas§	20	53	272	1,587	3,022	—	0	16	—	11	—	0	4	—	1
Mountain	3	25	48	662	1,274	—	0	12	9	17	—	0	17	7	17
Arizona	—	0	0	—	—	—	0	4	9	8	—	0	2	4	3
Colorado§	3	9	41	253	690	—	0	7	—	1	—	0	14	3	6
Idaho§	N	0	0	N	N	—	0	3	—	1	—	0	5	—	2
Montana§	—	3	17	144	113	—	0	1	—	1	—	0	1	—	—
Nevada§	N	0	0	N	N	—	0	1	—	5	—	0	1	—	4
New Mexico§	—	1	7	64	91	—	0	2	—	1	—	0	1	—	—
Utah	—	6	22	188	380	—	0	1	—	—	—	0	0	—	1
Wyoming§	—	0	3	13	—	—	0	1	—	—	—	0	2	—	1
Pacific	—	1	5	20	76	—	0	12	—	7	—	0	12	2	8
Alaska	—	0	4	20	45	—	0	0	—	—	—	0	0	—	—
California	—	0	0	—	—	—	0	8	—	6	—	0	6	2	8
Hawaii	—	0	2	—	31	—	0	0	—	—	—	0	0	—	—
Oregon	N	0	0	N	N	—	0	1	—	—	—	0	4	—	—
Washington	N	0	0	N	N	—	0	6	—	1	—	0	3	—	—
American Samoa	N	0	0	N	N	—	0	0	—	—	—	0	0	—	—
C.N.M.I.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Guam	—	0	3	9	14	—	0	0	—	—	—	0	0	—	—
Puerto Rico	1	5	30	150	345	—	0	9	—	—	—	0	0	—	—
U.S. Virgin Islands	—	0	0	—	—	—	0	0	—	—	—	0	0	—	—

C.N.M.I.: Commonwealth of Northern Mariana Islands.
U: Unavailable. —: No reported cases. N: Not reportable. NN: Not Nationally Notifiable. Cum: Cumulative year-to-date counts. Med: Median. Max: Maximum.
* Incidence data for reporting years 2009 and 2010 are provisional. Data for HIV/AIDS, AIDS, and TB, when available, are displayed in Table IV, which appears quarterly.
† Updated weekly from reports to the Division of Vector-Borne Infectious Diseases, National Center for Zoonotic, Vector-Borne, and Enteric Diseases (ArboNET Surveillance). Data for California serogroup, eastern equine, Powassan, St. Louis, and western equine diseases are available in Table I.
§ Contains data reported through the National Electronic Disease Surveillance System (NEDSS).
¶ Not reportable in all states. Data from states where the condition is not reportable are excluded from this table, except starting in 2007 for the domestic arboviral diseases and influenza-associated pediatric mortality, and in 2003 for SARS-CoV. Reporting exceptions are available at http://www.cdc.gov/ncphi/disss/nndss/phs/infdis.htm.

TABLE III. Deaths in 122 U.S. cities,* week ending July 17, 2010 (28th week)

Reporting area	All causes, by age (years)						P&I† Total
	All Ages	≥65	45–64	25–44	1–24	<1	
New England	525	351	124	25	10	15	41
Boston, MA	138	80	45	7	3	3	10
Bridgeport, CT	36	23	10	2	1	—	5
Cambridge, MA	9	7	2	—	—	—	2
Fall River, MA	31	21	10	—	—	—	3
Hartford, CT	48	33	12	2	—	1	5
Lowell, MA	18	13	4	—	—	1	2
Lynn, MA	6	3	1	2	—	—	—
New Bedford, MA	28	24	1	3	—	—	1
New Haven, CT	23	17	4	1	1	—	—
Providence, RI	59	35	15	1	2	6	—
Somerville, MA	2	—	1	1	—	—	—
Springfield, MA	38	22	10	3	2	1	3
Waterbury, CT	36	30	4	2	—	—	1
Worcester, MA	53	43	5	1	1	3	9
Mid. Atlantic	2,206	1,489	507	115	53	42	122
Albany, NY	55	36	15	1	1	2	6
Allentown, PA	19	16	3	—	—	—	2
Buffalo, NY	92	59	25	2	2	4	12
Camden, NJ	19	10	3	4	1	1	—
Elizabeth, NJ	12	9	2	1	—	—	1
Erie, PA	65	50	14	—	1	—	5
Jersey City, NJ	17	12	4	—	1	—	1
New York City, NY	1,102	764	247	56	19	16	43
Newark, NJ	34	21	5	7	1	—	2
Paterson, NJ	20	13	5	2	—	—	—
Philadelphia, PA	406	243	110	24	15	14	18
Pittsburgh, PA§	31	17	7	4	2	1	3
Reading, PA	23	17	4	—	1	1	1
Rochester, NY	92	59	21	5	4	3	12
Schenectady, NY	30	23	6	—	1	—	2
Scranton, PA	20	15	3	2	—	—	1
Syracuse, NY	101	79	18	2	2	—	10
Trenton, NJ	37	21	11	5	—	—	—
Utica, NY	9	8	—	—	1	—	1
Yonkers, NY	22	17	4	—	1	—	2
E.N. Central	1,978	1,289	507	120	33	29	104
Akron, OH	41	24	11	3	1	2	5
Canton, OH	22	17	4	1	—	—	2
Chicago, IL	253	157	65	28	2	1	13
Cincinnati, OH	70	42	18	5	3	2	3
Cleveland, OH	240	175	47	11	5	2	10
Columbus, OH	289	188	78	15	4	4	15
Dayton, OH	135	96	29	6	2	2	11
Detroit, MI	147	75	52	12	4	4	6
Evansville, IN	52	37	13	1	1	—	3
Fort Wayne, IN	68	57	10	—	—	1	4
Gary, IN	12	6	3	3	—	—	—
Grand Rapids, MI	49	32	10	2	1	4	6
Indianapolis, IN	194	116	66	4	3	5	7
Lansing, MI	43	31	6	5	1	—	3
Milwaukee, WI	75	44	25	4	1	1	2
Peoria, IL	45	32	10	2	1	—	5
Rockford, IL	40	28	7	3	2	—	4
South Bend, IN	49	29	17	3	—	—	1
Toledo, OH	100	61	26	12	1	—	3
Youngstown, OH	54	42	10	—	1	1	1
W.N. Central	585	392	143	23	13	14	41
Des Moines, IA	60	43	13	4	—	—	9
Duluth, MN	42	32	8	1	1	—	2
Kansas City, KS	32	21	7	4	—	—	2
Kansas City, MO	101	64	29	5	2	1	5
Lincoln, NE	41	32	7	1	1	—	2
Minneapolis, MN	50	25	16	4	1	4	2
Omaha, NE	91	66	17	1	1	6	5
St. Louis, MO	7	3	4	—	—	—	1
St. Paul, MN	56	36	16	—	4	—	4
Wichita, KS	105	70	26	3	3	3	9
S. Atlantic	1,196	752	294	91	37	22	84
Atlanta, GA	167	102	37	19	6	3	16
Baltimore, MD	132	69	42	10	9	2	16
Charlotte, NC	105	68	28	7	1	1	6
Jacksonville, FL	148	101	35	9	1	2	7
Miami, FL	91	66	18	6	1	—	4
Norfolk, VA	51	35	10	3	—	3	—
Richmond, VA	62	34	18	5	4	1	2
Savannah, GA	54	34	10	4	4	2	4
St. Petersburg, FL	54	34	9	6	3	2	3
Tampa, FL	198	138	46	9	1	4	12
Washington, D.C.	124	66	36	13	7	2	14
Wilmington, DE	10	5	5	—	—	—	—
E.S. Central	902	585	233	49	19	16	77
Birmingham, AL	167	98	47	12	4	6	13
Chattanooga, TN	80	58	16	4	2	—	6
Knoxville, TN	103	66	31	5	—	1	4
Lexington, KY	77	47	22	6	—	2	4
Memphis, TN	157	100	39	10	6	2	20
Mobile, AL	111	80	23	7	1	—	5
Montgomery, AL	55	37	15	2	1	—	7
Nashville, TN	152	99	40	3	5	5	18
W.S. Central	1,124	749	262	72	25	15	66
Austin, TX	80	54	22	3	—	1	4
Baton Rouge, LA	61	51	6	2	2	—	—
Corpus Christi, TX	58	42	13	3	—	—	8
Dallas, TX	180	118	46	9	4	2	16
El Paso, TX	52	38	10	4	—	—	1
Fort Worth, TX	U	U	U	U	U	U	U
Houston, TX	127	71	35	11	3	7	5
Little Rock, AR	83	59	16	5	2	1	1
New Orleans, LA	U	U	U	U	U	U	U
San Antonio, TX	276	187	61	15	10	3	18
Shreveport, LA	64	42	14	7	—	1	7
Tulsa, OK	143	87	39	13	4	—	6
Mountain	1,122	730	274	76	22	20	61
Albuquerque, NM	139	97	35	4	1	2	15
Boise, ID	54	35	14	3	2	—	2
Colorado Springs, CO	51	32	16	2	1	—	—
Denver, CO	76	47	14	5	4	6	2
Las Vegas, NV	269	189	57	16	5	2	10
Ogden, UT	33	22	7	2	1	1	4
Phoenix, AZ	170	88	59	19	1	3	9
Pueblo, CO	39	23	8	5	3	—	2
Salt Lake City, UT	136	90	27	13	2	4	11
Tucson, AZ	155	107	37	7	2	2	6
Pacific	1,725	1,181	382	85	38	39	133
Berkeley, CA	15	10	3	1	1	—	2
Fresno, CA	132	89	33	6	2	2	15
Glendale, CA	33	30	3	—	—	—	8
Honolulu, HI	49	35	11	2	1	—	5
Long Beach, CA	61	29	21	5	3	3	3
Los Angeles, CA	259	171	58	13	8	9	26
Pasadena, CA	19	18	1	—	—	—	3
Portland, OR	120	79	29	8	1	3	5
Sacramento, CA	194	132	45	11	3	3	10
San Diego, CA	189	122	43	13	4	7	9
San Francisco, CA	128	85	28	9	2	4	14
San Jose, CA	191	141	40	5	3	2	15
Santa Cruz, CA	34	30	4	—	—	—	—
Seattle, WA	118	77	28	7	4	2	7
Spokane, WA	69	53	10	—	3	3	6
Tacoma, WA	114	80	25	5	3	1	5
Total¶	11,363	7,518	2,726	656	250	212	729

U: Unavailable. —: No reported cases.

* Mortality data in this table are voluntarily reported from 122 cities in the United States, most of which have populations of >100,000. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

† Pneumonia and influenza.

§ Because of changes in reporting methods in this Pennsylvania city, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

¶ Total includes unknown ages.

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